Indiana State Rural Health Plan

July 2012

Submitted by

Affiliated Service Providers of Indiana, Inc.

Acknowledgements

The Indiana State Rural Health Plan represents the voices of many who seek to provide Indiana's rural citizens with exceptionally high quality, affordable, and accessible health care. Dozens of administrators and community network representatives provided insight and data through survey and interview processes that informed the primary themes of this document that will serve as a starting point for planning and forward movement in rural health care within Indiana.

Table of Contents

List of Figures

Executive Summary

The Indiana Rural Health Plan is a living document that captures the economic, workforce, and health care needs of counties served by Indiana's critical access hospitals. Indiana's rural populations are at the center of multiple forces that can work in concert to improve and sustain health. Indiana is fortunate to have established partnerships on a statewide level that are keenly focused upon issues of workforce development, quality service delivery, patient safety, emerging telehealth connectivity, data gathering and analysis, training, and collaboration.

Through a review of secondary sources as well as through a dual survey process of key rural health leaders and statewide organizations addressing rural health care, the current plan establishes five directives to be addressed in its work plan. These include (1) support collaborative solutions to issues of rural health service quality and access, (2) provide equitable and accountable funding strategies for appropriate projects resulting in improved care and/or provider accountability for rural citizens, (3) utilize existing expertise already working on rural health issues to the greatest degree possible, (4) aid in accountability of clinical practice and financial acumen of rural providers, and (5) act as a conduit of accurate information to and from critical access hospitals, rural providers, training experts, and state policy makers.

Indiana continues to be challenged by shifts in demographic composition, loss of employment, an uneven distribution of health care professionals, and shifts in payer mix for service providers. Yet, Indiana's rural health care providers remain dedicated to serving their communities, developing skills, and remaining financially viable. Through technology, creativity, collaboration, efficiencies of scale, and improved training and education, rural health care providers remain resilient in the face of these challenges.

To support rural providers and their constituent consumers, the Indiana State Office of Rural Health has formed a Flex Advisory Committee and a Rural Roundtable to enhance multi-disciplinary communication, project collaboration, and efficiencies through integrative approaches. Further, Flex funding processes are responsive to the identified needs of Critical Access Hospitals as recorded through survey and focus group data. The process is objective and accountable and aligned with categories of funding. The resulting work plan for the current funding year fits within the parameters of the five state plan directives, relates directly to wider national initiatives, and fits well within the overall goals for the State Office of Rural Health as informed by rural stakeholders.

Movement toward an integrated system of care is especially challenging in rural areas, as many essential services *(*e.g., hospital and physician services, behavioral health services, dental care, and EMS services) are not available in many small communities. As a result, it is critical to develop linkages with providers in other communities and to use technology as effectively as possible. The State Office of Rural Health maintains interest and support for emerging technologies and models of cooperation that bring high quality coordinated and culturally sensitive care to Indiana's rural populations while supporting viable revenue streams for providers. The Indiana Rural Health Plan is a catalyst for forward movement of initiatives and collaborations in place within the state.

Forward

The US Census Bureau reports that the size of the rural population in the U.S. has been growing, but not at the same pace as have fully urbanized regions. People living in rural (i.e., unincorporated) areas totaled 59,492,276 in 2010, up just over 400,000 from 2000. This rural population equaled 9.5 percent of the population in 2010, down from 10.7 percent in 2000. According to 2010 census figures, 40.8% of Indiana's population resides in rural and small city environments. Indiana ranks 26th nationally in rurality.

A snapshot of the state of Indiana's health provides a picture of a general population that ranks above the national BRFSS medians on smoking prevalence, obesity, diabetes, and asthma. In addition, Hoosiers are less likely to participate in early detection testing. See **Figure 1** below.

Figure 1. State Rankings, BRFSS 2008 - 2010 Comparison

Current Smokers						Obesity based on bmi						Ever told you have diabetes						Told you currently have asthma					
2008		2009		2010		2008		2009		2010		2008		2009		2010		2008		2009		2010	
%	R	%	R	%	R	%	R	%	R	%	R	%	R	%	R	%	R	%	R	%	R	%	R
26	2	23.1	5	21.2	10	26.9	23	29.9	14	30.2	14	9.5	12	9.3	14	9.8	15	9.2	19	9.1	18	9.5	18
Nat'l Median 18.3		Nat'l Median 17.9		Nat'l Median 18.3		Nat'l Median 26.6		Nat'l Median 26.9		Nat'l Median 27.6		Nat'l Median 8.2		Nat'l Median 8.3		Nat'l Median 8.7		Nat'l Median 8.7		Nat'l Median 8.8		Nat'l Median 9.1	

Source: Behavioral Risk Factor Surveillance System Indiana Statewide Survey Data, 2008; CDC BRFSS Website, 2012.

Indiana's trends generally coincide with those of the nation in terms of upward and downward movement. However, Indiana continues to exceed the national median on all of the measures listed above. Two conditions that could be preventable are smoking and obesity. Indiana ranks tenth in the nation in the consumption of tobacco with an annual consumption of 78.9 million packs. The state also ranks 35th in terms of smoke-free air laws (McMillan, 2010). In 2012, the American Lung Association graded Indiana with an "F" in Smokefree Air Laws; "F" in Tobacco Prevention and Control Spending, and "F" in Cessation Support. Tobacco use and obesity contribute heavily to the other conditions on the list.

The Kaiser Family Foundation State Health Facts for Indiana (2011) revealed higher birth rates for teens, higher infant mortality across all race/ethnicity groups, lower overall life expectancy, and higher child mortality than the national average. Clearly, the health of Indiana's citizens is at risk.

Indiana has 122 hospitals, 38 of which are located in rural areas (North Carolina Rural Health Research and Policy Analysis Center, Dec. 2008). The state has 35 hospitals currently identified as Critical Access Hospitals (June, 2012). There are 61 Rural Health Clinics in Indiana (Kaiser, 2010), and 19 Federally Qualified Health Centers provide services at 86 sites in the state (Kaiser, 2008). Most Hoosiers have some form of health insurance coverage, although 14% of the state's residents lack any health insurance (Kaiser, 2012).

Physician Access

Nationally, Indiana ranks 38th in overall active physician rate according to the 2011 State Physician Workforce Data Book developed by the Association of American Medical Colleges. In addition, 23.4% of Indiana physicians are aged 60 or over, underscoring the need for an infusion of physicians to replace the aging workforce within the next ten years. **Figure 2** shows the counties with the best and worst access to Indiana's physicians. Marion County, which contains Indiana's capital, tops the list. Its access score is 1.6 times as high as that of the second-ranked county, Vanderburgh County, and more than two times as high as all but four counties. Marion County's primacy shows that access to physician care is very unequally distributed across Indiana. Indiana counties with the worst access to physician care are listed at the bottom of **Figure 2**. Posey County in southern Indiana has the worst access to physicians, followed by four other counties located along the Ohio River: Switzerland, Ohio, Perry, and Spencer counties. The poor access in some of these counties is mitigated to some extent by physicians in other states. Only two of the 10 counties with the worst physician access, Benton and Newton counties, are located in the northern portion of the state. They are part of a vast area along the Illinois border that has also been identified as a Health Professional Shortage Area according to the criteria of the U.S. Department of Health and Human Services.

Figure 2. Counties with Best and Worst Physician Access.

Rank	County	
	The Best	
1	Marion	1.00
2	Vanderburgh	0.64
3	Hamilton	0.632
4	Monroe	0.538
5	Hancock	0.525
6	St. Joseph	0.500
7	Allen	0.482
8	Boone	0.466
9	Hendricks	0.462
10	Tippecanoe	0.455
	The Worst	
83	Ripley	0.051
84	Benton	0.048
85	Sullivan	0.046
86	Newton	0.037
87	Crawford	0.018
88	Spencer	0.018
89	Perry	0.018
90	Ohio	0.010
91	Switzerland	0.005
92	Posey	0.000

*The higher the score, the better the access. Source: Purdue Center for Regional Development (2010).

Rural Indiana

Indiana represents a mix of major metropolitan areas with concentrations of industry and commerce. Sixty percent of Indiana counties (55 of 92) are located in rural or non-metropolitan areas. Twenty-six (26) of the 55 rural counties in Indiana are partially or completely medically underserved or have shortages of health professionals. This designation indicates that residents in

certain rural areas have fewer physicians than urban areas and a higher rate of unemployment, poverty rates, and population over the age of 65 years.

The challenges of health professional shortages are amplified in rural Indiana given the elevated rates of tobacco use, obesity, diabetes, and hypertension. These rates are directly linked to higher rates of cancer and heart disease in rural versus urban counties. While these all-too common health problems can be improved through increased physical activity and improved nutrition, the barriers associated with rural living, such as limited sidewalks, fitness centers, walking trails, as well as lower socio-economic status, make access to these resources a challenge.

The health of Indiana's rural residents and their access to quality health care, public health services and preventive health programs differ from urban residents. These statistics are no surprise given the current economic climate and the rising cost of health insurance. The number of uninsured and underinsured residents has increased and is causing more individuals to turn to the Indiana Medicaid program and safety net providers for basic health services, which places a financial strain on these already-stressed programs.

Social Determinants of Health

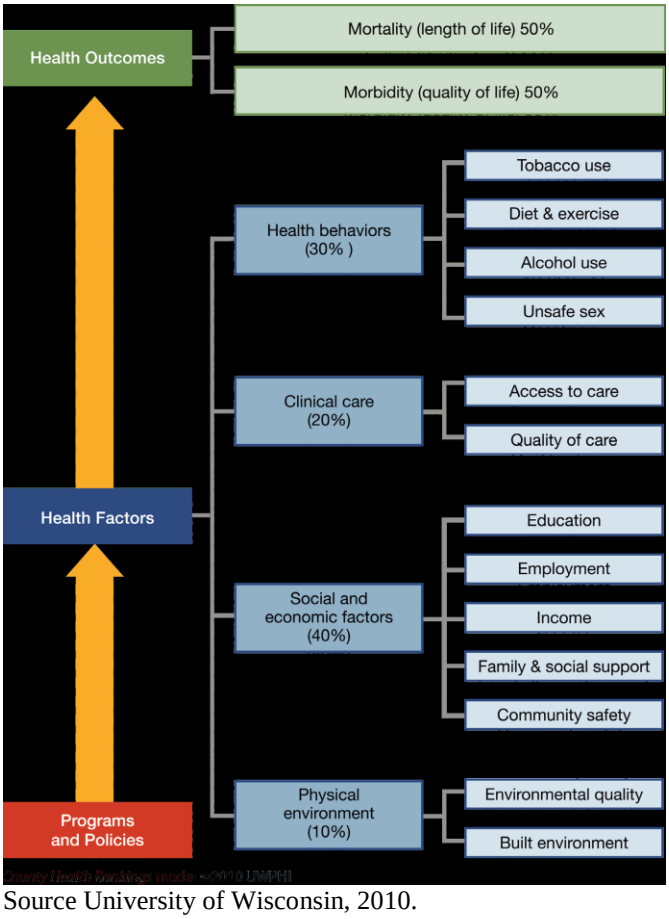
Social determinants of health are factors in the social environment that contribute to or detract from the health of individuals and communities. These factors include, but are not limited to, the following:

- Socioeconomic status
- Transportation
- Housing
- Access to food and services
- Discrimination by social grouping (e.g., race, gender, or class)
- Social or environmental stressors

Social determinants of health have repeatedly been found to be associated with heart disease and stroke. These factors work either directly to affect the burden of chronic diseases and their risk factors, or indirectly, through their influence on health-promoting behaviors. In considering the status of rural Indiana at this time, all of the determinants are operating against Indiana's rural citizens.

Rural Hoosiers are at a greater disadvantage due to higher prevalence of each of these chronic issues, plus greater unemployment, further distances to treatment, lower income, lower levels of education, aging patterns, lower levels of insurance coverage and a shortage of health care workers. The County Health Rankings published by the University of Wisconsin Population Health Institute demonstrate rural/urban disparity. Multiple factors were considered in developing the rankings. The following graphic depicts the elements that interact with health factors and their distribution across the community. This interplay of factors and community programs and policies produce health outcomes.

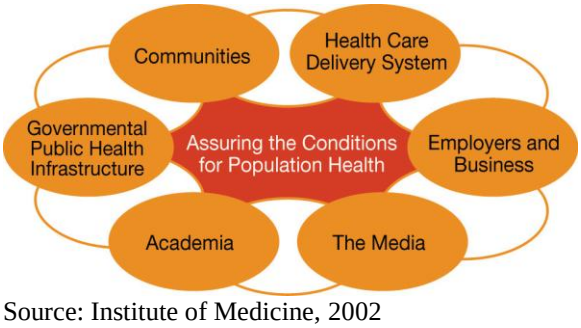
Figure 3. Components of Health Outcomes.



Source University of Wisconsin, 2010.

The types of community programs and policies could be generated from the following community stakeholders.

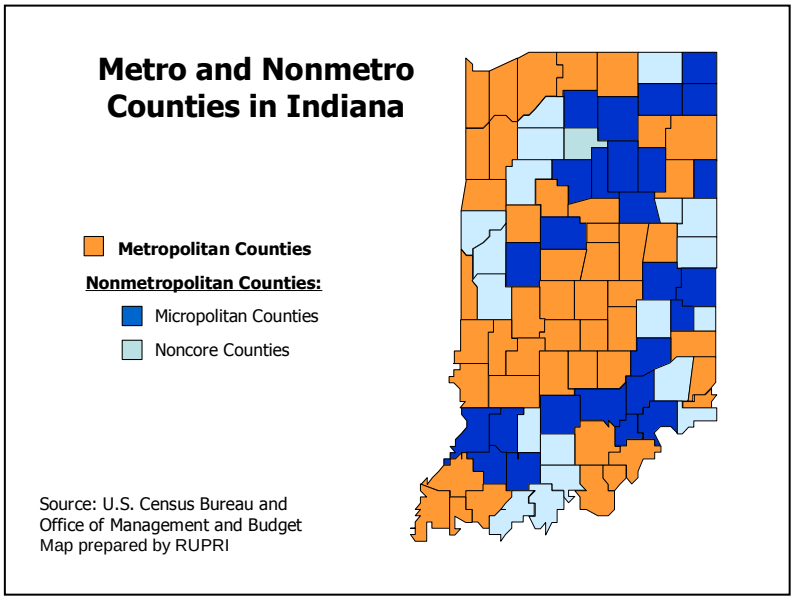
Figure 4. Community-based Programs and Policies Designed to Alter the Distribution of Health Factors within the Community.



Source: Institute of Medicine, 2002

Within Indiana specifically, disparities exist between rural and urban environments because of the interaction of these factors. The map below separates metropolitan and non-metropolitan counties within the state.

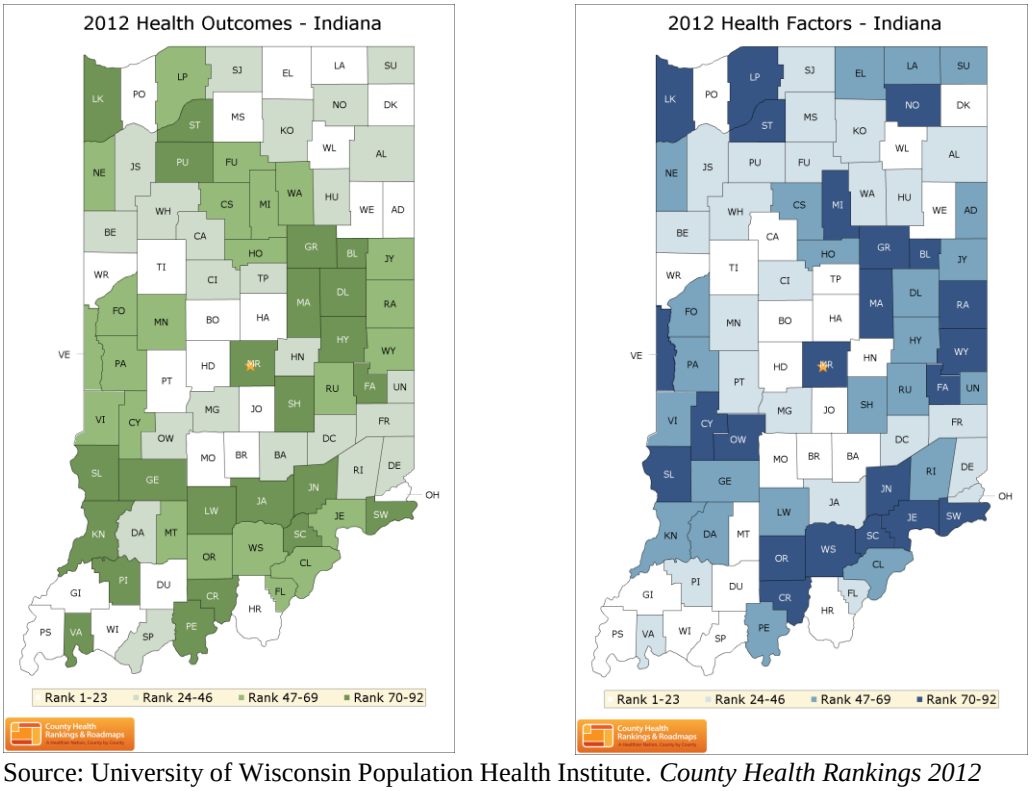
Figure 5. Metro and Nonmetro Counties in Indiana.



With the variable of rural and urban counties in mind, the state's health disparities become clearer when looking at rankings of health outcomes and health factors.

Figure 6. Maps of Indiana County Health Outcomes and Health Factors Rankings.

Health Outcomes **Health Factors**



Source: University of Wisconsin Population Health Institute. *County Health Rankings 2012*

An alternative method of examining the rankings is through the following list. Asterisks identify rural counties.

Figure 7. Health Outcomes and Health Factor Ratings of Indiana Counties, 2012.

Rank	Health Outcomes	Rank	Health Factors	Rank	Health Outcomes	Rank	Health Factors
1	Hamilton	1	Hamilton	47	Cass*	47	Delaware
2	Boone	2	Boone	48	Randolph*	48	Greene
3	LaGrange*	3	Hendricks	49	Fountain*	49	Adams*
4	Dubois*	4	Hancock	50	Jefferson*	50	Rush*
5	Hendricks	5	Monroe	51	Miami*	51	Union*
6	Brown	6	Dubois*	52	Montgomery*	52	Steuben*
7	Putnam	7	Warrick	53	Clark	53	Lawrence*
8	Wells	8	Spencer*	54	Floyd	54	Howard
9	DeKalb*	9	Posey	55	Fulton*	55	Ripley*
10	Adams*	10	Tippecanoe	56	Clay	56	Henry*
11	Warrick	11	Wells	57	Wabash*	57	Shelby
12	Gibson	12	Johnson	58	Jay*	58	Daviess*
13	Johnson	13	Tipton	59	Vigo	59	Parke*
14	Posey	14	Porter	60	Newton	60	Clark
15	Whitley	15	Warren*	61	Rush*	61	Vigo
16	Warren*	16	Gibson	62	Vermillion	62	LaGrange*
17	Monroe	17	Whitley	63	Howard	63	Perry*
18	Porter	18	Harrison	64	Washington	64	Newton
19	Elkhart	19	Martin*	65	LaPorte	65	Jay*
20	Tippecanoe	20	Brown	66	Orange*	66	Fountain*
21	Marshall*	21	Bartholomew	67	Parke*	67	Elkhart
22	Harrison	22	DeKalb*	68	Martin*	68	Cass*
23	Ohio	23	Carroll	69	Wayne*	69	Knox*
24	Huntington*	24	Ohio	70	Jackson*	70	LaPorte
25	Kosciusko*	25	Dearborn	71	Perry*	71	Randolph*
26	Dearborn	26	Marshall*	72	Lawrence*	72	Vermillion
27	Union*	27	Vanderburgh	73	Henry*	73	Grant*
28	Hancock	28	Franklin	74	Pulaski*	74	Clay
29	Benton	29	Allen	75	Madison	75	Orange*
30	Noble*	30	Pike*	76	Vanderburgh	76	Noble*
31	Spencer*	31	Morgan	77	Shelby	77	Jefferson*
32	Owen	32	Clinton*	78	Blackford*	78	Switzerland*
33	Tipton	33	Floyd	79	Grant*	79	Sullivan
34	Bartholomew	34	Kosciusko*	80	Knox*	80	Miami*
35	Allen	35	Benton	81	Greene	81	Wayne*
36	Steuben*	36	St. Joseph	82	Marion	82	Lake

37	White*	37	Montgomery*	83	Crawford*	83	Blackford*
38	Ripley*	38	Putnam	84	Lake	84	Owen
39	Decatur*	39	Pulaski*	85	Delaware	85	Marion
40	Carroll	40	Wabash*	86	Jennings*	86	Washington
41	Jasper	41	Jasper	87	Switzerland*	87	Jennings*
42	Morgan	42	Huntington*	88	Fayette*	88	Fayette*
43	St. Joseph	43	Decatur*	89	Sullivan	89	Crawford*
44	Clinton*	44	Fulton*	90	Starke*	90	Scott*
45	Franklin	45	White*	91	Pike*	91	Madison
46	Daviess*	46	Jackson*	92	Scott*	92	Starke*

Source: University of Wisconsin Population Health Institute. *County Health Rankings 2012*

The following chart shows the rural county rankings as they appear in quartiles, comparing rankings in 2010 to those of 2012, demonstrating the distribution of rural counties as they relate to health factors and health outcomes.

Figure 8. Quartile Distribution of Rural Counties: Health Outcomes and Health Factors, Comparing 2010 to 2012.

	Quartile 1 Rankings 1 - 23		Quartile 2 Rankings 24-46		Quartile 3 Rankings 47- 69		Quartile 4 Rankings 70-92	
	2010	**2012**	**2010**	**2012**	**2010**	**2012**	**2010**	**2012**
Health Outcomes	7	6	10	11	15	14	14	15
Health Factors	4	5	14	12	17	15	11	14

It appears that for the most part, rural counties are increasingly falling into the lower ranking quartiles over time in both health outcomes and health factors.

A recent Robert Wood Johnson report (March, 2010) identified Indiana as ranking 47th in State Public Health Budgets; 50th in HRSA dollars received in FY 2009; and 48th in CDC dollars allocated in FY 2009. Indiana struggles to meet the health needs of its citizens under these constraints. Adding to low levels of economic support is job loss within the state. Indiana has lost 209,800 manufacturing jobs since 2000.

The current economic picture nationally and within the state have created a shift in payor (payer?) mix for Indiana's CAHs complicated by a recent 5% reduction in Medicaid reimbursement to hospitals for outpatient and inpatient hospital services. These conditions add pressure to hospital operations that must rely on sound fiscal leadership and economies of operations to maintain access to hospital care for Indiana's rural populations.

Background and Purpose

The purpose of the Indiana Rural Health Plan is to provide a map for improving the health of Hoosiers through a more accessible, efficient, and accountable system of service delivery and Flex funds spending. The plan is divided into six sections. **Section One** identifies some of the major health and economic concerns of Indiana's rural population. **Section Two** describes

Indiana's Critical Access Hospitals, their impact and necessary support systems. **Section Three** discusses the need for health workforce development and retention in Indiana's rural areas. **Section Four** explains the Flex proposal development process, reviews recent CAH statistics, and summarizes the findings of the planning process leading to the focus of the Indiana State Rural Health Plan. **Section Five** addresses the major themes and the associated activities that will support the evolution and sustainability of high quality, affordable rural health care in Indiana through the efforts of the State Office of Rural Health and its partners. **Section Six** provides a brief summary and direction for the future.

Process for Developing the Plan

The development of the Flex-related sections of the Indiana State Rural Health plan evolved through two primary approaches. The key stakeholders involved in the plan included the CEOs of Indiana's Critical Access Hospitals and the members of the Indiana Rural Roundtable, a group of diverse rural medical stakeholders convened as follow-up to the Rural Health Plan of 2009. Affiliated Service Providers of Indiana, Inc. served as the facilitative body for the plan, under the direction of Ann Alley, Director, Primary Care Office, Public Health and Preparedness Commission, Indiana State Department of Health.

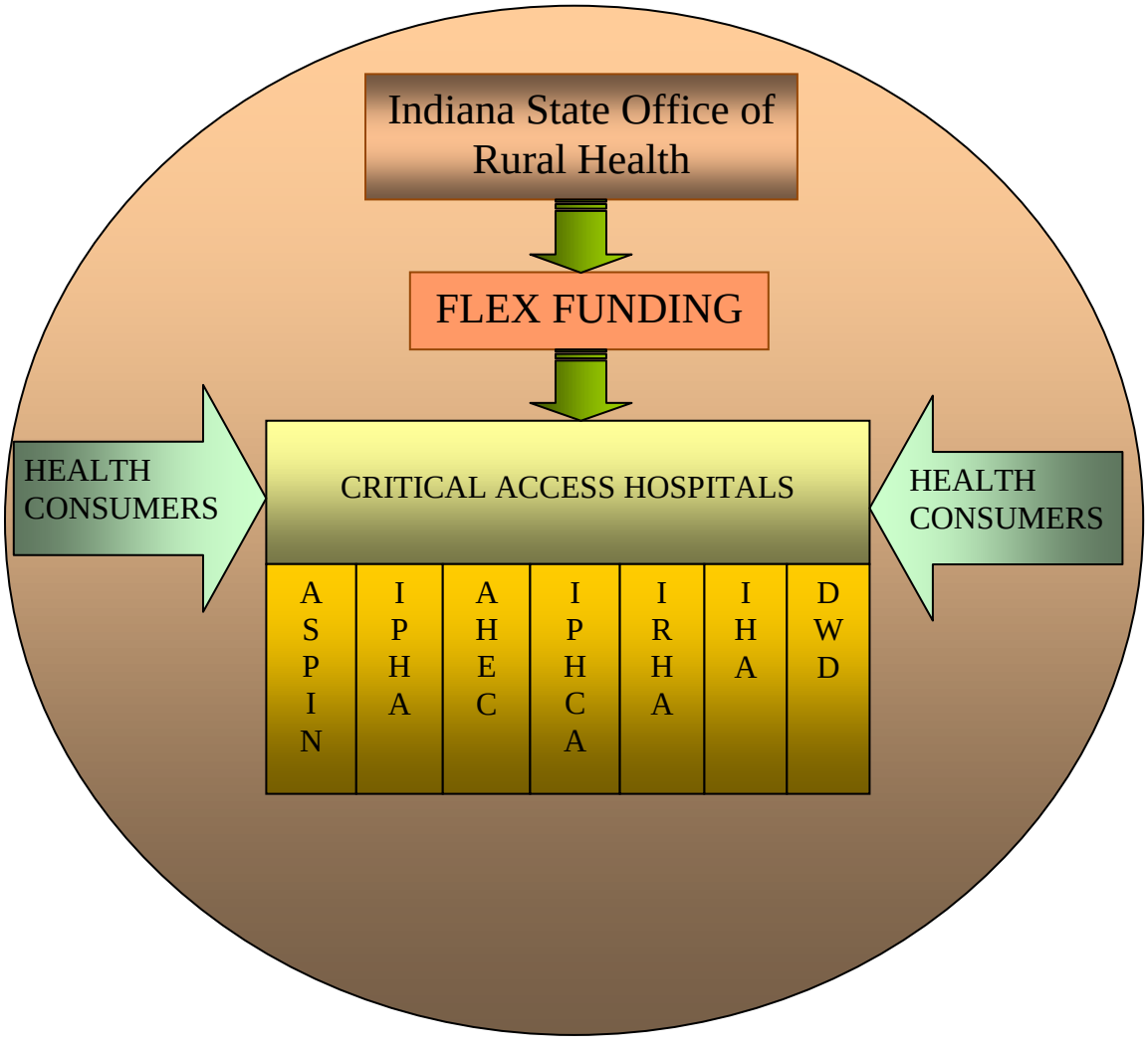
The CEOs of Indiana's thirty-five critical access hospitals were invited to submit responses to an electronic survey that captured current-state health care issues within the context of a depressed economy and increasingly vulnerable consumers of medical care, along with their assessment of the largest issues facing the critical access hospitals, with potential solutions. The survey instrument is included in Appendix A. Outcome data is presented and discussed in Section Four of this plan. The survey was fundamentally a repeat of the survey conducted in years 2010 and 2011, with the additional goal of being able to track changes within the time span.

The Rural Roundtable meets quarterly. The group members with their respective organizations are found in the chart below. Additional members are expected to be recruited as the group continues to respond to rural health issues.

Indiana Rural Round Table Members 2012	
Ann Alley	Director, Primary Care Office, Public Health Preparedness Commission, Indiana State Department of Health
Don Kelso	Indiana Rural Health Association
Cindy Large	IRHA, Flex Coordinator for Indiana
Kathy Cook	Affiliated Service Providers of Indiana, Inc.
Jerry King	Indiana Public Health Association
Phil Morphew	Indiana Primary Health Care Association
Rick Kiovsky	Indiana AHEC
Becky Royer	Health Care Excel
Spencer Grover	Indiana Hospital Association
Elizabeth Darby	Indiana Workforce Development
Brittany Knick	State Office of Rural Health
Anna Barrett	Traumatic Brain Injury Association of Indiana
Carole Kacius	Indiana University School of Medicine Dept. of Public Health

Figure 9 below demonstrates the supportive relationship of these stakeholders to the success of the Critical Access Hospital

Figure 9. Indiana State Rural Health Plan Stakeholder Field.



This document summarizes existing research and statistics, previous health planning work, and knowledge gained through reports, plans, surveys, and interviews to create a comprehensive, living document that will serve as a foundation for current and future planning. It is hoped that its strategies and recommendations will lend information and support for the combined efforts of policymakers, health care providers, educational institutions, the Office of Rural Health, professional associations, and other stakeholders to improve the health of Indiana's rural population.

Vision

The primary goal of the Indiana Flex Plan is for Indiana to become a leader in supporting rural health providers and in providing rural citizens with the quality and performance improvement support needed by critical access hospitals.

A healthy rural Indiana will result from the provision of funding, performance improvement support, and collaborative problem-solving for sustainable solutions to support Indiana's Critical

Access Hospitals and their key stakeholders.

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University of Wisconsin Population Health Institute. *County Health Rankings 2010, 2012.*

Section I. A Picture of Indiana's Rural Population

Indiana's Rural Demographics

Indiana is in the Great Lakes region of the United States, with shoreline on Lake Michigan. The state is located in the Corn Belt, and most years has almost half of its cropland devoted to corn. Residents of Indiana are known as Hoosiers, which is also the team name for Indiana University athletic teams. Indiana covers 35,867 square miles. The chart below demonstrates that Indiana population overall is increasing, with the distribution of population shifting gradually to metropolitan communities.

Figure 10. Population Distribution by Metropolitan Status: Indiana and US, 2008 – 2010.

	Population Distribution by Metropolitan Status, Indiana (2008-2010), U.S. (2010)				
	IN 2008 #	IN 2009 #	IN 2010 #	IN (2010) %	US (2010) %
Metropolitan	4,499,200	4,624,656	4,634,624	73%	84%
Non-Metropolitan	1,774,700	1,774,500	1,714,176	27%	16%
Total	6,273,900	6,423,113	6,348,800	100%	100%

Notes: Non-Metropolitan includes both respondents living in non-metropolitan areas and areas not classified in either category.
Percentages may not sum to 100% due to rounding effects.
For more details, see "Notes to Demographic and Health Coverage Topics Based on the CPS" at http://www.statehealthfacts.kff.org/methodology.

Sources: Urban Institute and Kaiser Commission on Medicaid and the Uninsured estimates based on the Census Bureau's March 2007, 2008, 2009. Current Population Survey (CPS: Annual Social and Economic Supplements)

Definitions: **Metropolitan Statistical Area** must include at least one city with 50,000 or more inhabitants, or a Census-Bureau defined urbanized area of at least 50,000 inhabitants and a total metropolitan population of 100,000 or more (75,000 in New England). For more information, visit the Census Bureau website at http://www.census.gov/population/www/estimates/aboutmetro.html
NSD: Not Sufficient Data

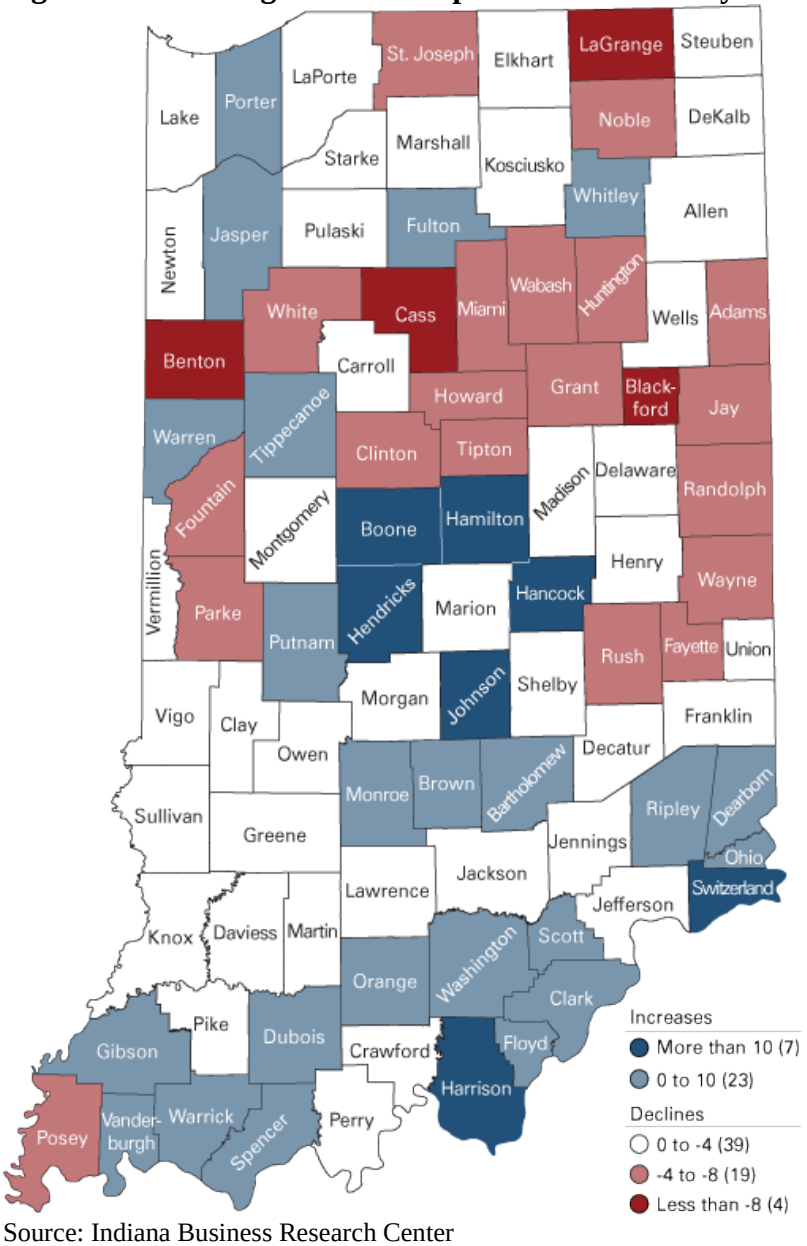
Indianapolis, the capital, is located in the central part of the state. The state's largest cities are Indianapolis, Fort Wayne, and Evansville. According to the U.S. Census Bureau (2009-2010), 84% of the state's population is white, 9% is African-American/Black, and 5% is of Hispanic/Latino origin, with 1.7% Asian, and .4% American Indian or Alaska native.

The average per-capita income for all Hoosiers in 2010 expressed in 2010 dollars was $33,981. According to the USDA Economic Research Service (2012) a poverty rate of 14.7% exists in rural Indiana, compared to a 15.4% level in urban areas of the State. These figures demonstrate an increase in poverty for both classifications over 2008 levels which were 13% and 12.6% respectively.

The following map represents percent change in population across Indiana from census data in

2000 to 2010. Notable population losses fell within primarily rural areas, with highest growth centered in counties surrounding the capital of Indianapolis.

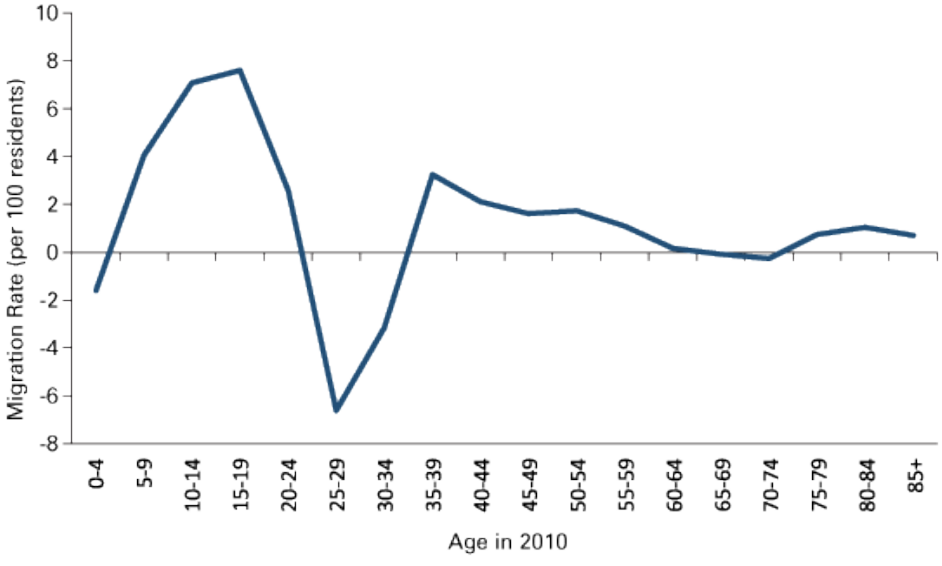
Figure 11. Net Migration Rates per 100 Residents by County, 2000 to 2010.



Source: Indiana Business Research Center

Figure 12 shows, the state had high rates of net in-migration in the 5-to-19 and the 35-to-44 age groups, suggesting that Indiana was an attractive destination for younger families in the last decade. A strong net inflow of college students also helped to boost the migration rates for the 15-to-24 age group. According to the National Center for Education Statistics, Indiana regularly ranks among the top states for net migration of college freshman. Indiana lost large numbers of young adults over the last decade. On net, members of the 25-to-29 age group left the state over the decade at a rate of nearly seven residents per 100. The net outflow in the 30-to-34 age group was also strong.

Figure 12. Indiana Net Migration Rates by Age, 2010.



Source: Indiana Business Research Center

Employment Change and Migration

Employment decisions play an important role in migration patterns. The 2010 Current Population Survey indicates that 18 percent of short-distance moves are initiated by employment decisions. This figure is closer to 40 percent for long-distance moves of 200 miles or more.

Additionally, over the last two decades, shifts in Indiana employment change from year-to-year-whether positive or negative-have typically signaled a similar turn in the state's annual net migration levels. Indiana's economy has struggled over the past decade. Indiana shed 225,000 jobs overall in the last decade and lost nearly 216,000 jobs in manufacturing alone. More than half of these manufacturing losses came before the most recent recession hit in late 2007.

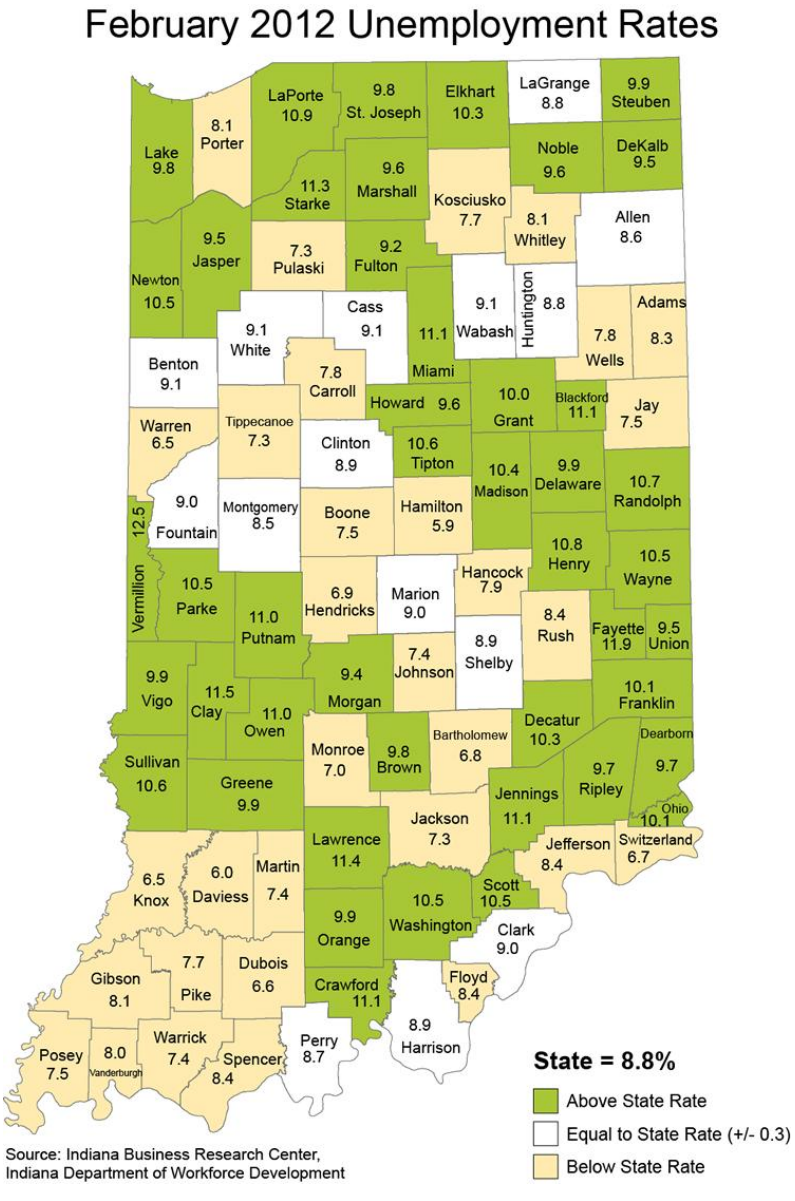
This fairly strong association between changes in employment and migration is important to understand given the current economic downturn. Recently released data from the U.S. Census Bureau documents the fact that largely rural counties lost the greatest proportion of their populations through migration. For example, Pike County in southwestern Indiana lost more than 2% of its population through net migration in 2009. A net outflow of residents accounted for more than a 1.5% population decline in White, Parke, and Crawford counties. Note that migration differs from overall population change, as it pertains only to population shifts into the state and out from the state. Natural increases and decreases in population due to births and deaths are also considered in population change.

Indiana is one of only a handful of states in the Midwest or Northeast to see its population under the age of 17 increase between 2000 and 2010. However, all of this growth occurred in just 24 counties. Meanwhile, the child population declined by 5 percent or more in roughly half of Indiana counties. So, large areas of Indiana are aging rapidly due, in part, to out-migration while families are concentrating more and more in a few distinct regions of the state (Kinghorn, 2012).

Indiana, like much of the nation, has seen heavy job losses. In fact, between May 2008 and May

2009, Indiana lost 156,000 jobs, which exceeds the state's greatest decline during the previous recession (132,600 jobs lost between May 2000 and July 2003).According to the Kaiser Foundation, employment in Indiana is rebounding However, this is not occurring evenly across the state. (See **Figure 13**.)

Figure 13. Indiana Unemployment Rates by County, February 2012.



Indiana has not escaped the recent national economic downturns. The following table includes the counties in which Critical Access Hospitals are located, comparing unemployment statistics from June of 2008 through February 2012. These figures were prepared in cooperation with the U.S. Bureau of Labor Statistics and have been adjusted to the current population survey for use in allocating federal funds. Although gains in employment are apparent, these counties continue to have unemployment rates higher than the state and national averages.

Figure 14. Unemployment Rate and Population Shifts in Indiana County Locations of Critical Access Hospitals 2008-2012.

County Location of Critical Access Hospital	**Rate June 2008**	**Rate June 2009**	**Rate June 2010**	**Rate January 2011**	**Rate February 2012** (Indiana Rate = 8.8%)	**Unemployment Change in % from January 2011 to February 2012**	**Population Shift in % 2000 – 2010**
Adams	5.5	14.8	10.0	9.2	8.3	-9.8%	2.3
Blackford	7.2	15.5	12.6	11.3	11.1	-1.8%	-9.1
Clay	7.3	13.1	10.6	11.7	11.5	-1.7%	1.3
Clinton	5.1	11.6	10.1	9.5	8.9	-6.3%	-1.9
Decatur	6.1	13.2	10.6	10.6	10.3	-2.8%	4.8
Fulton	5.9	12.7	10.6	10.6	9.2	-13.2%	1.6
Gibson	5.3	9.4	8.2	7.5	8.1	+8%	3.1
Greene	6.3	8.7	9.3	9.4	9.9	+5.3%	0
Harrison	5.6	9.7	8.3	10.5	8.9	-15.2%	14.7
Jasper	5.3	9.5	10.3	10.9	9.5	-12.8%	11.4
Jay	5.5	12.1	9.2	8.7	7.5	-13.8%	-2.5
Jennings	6.2	13.6	11.1	12.2	11.1	-9%	3.5
LaGrange	6.7	15.8	11.1	11.0	8.8	-20%	6.4
Lawrence	6.8	13.0	11.0	11.6	11.4	-1.7%	.5
Madison	6.6	11.4	11.6	11.3	10.4	-8%	-1.3
Marshall	6.3	13.5	10.6	11.1	9.6	-13.5%	4.3
Miami	7.4	16.5	11.4	11.6	11.1	-4.3%	2.3
Orange	5.6	10.5	10.6	10.4	9.9	-4.8%	2.8
Perry	5.1	10.1	9.5	9.6	8.7	-9.4%	2.3
Pulaski	5.3	11.1	8.8	8.6	7.3	-15.1%	-2.6
Putnam	7.2	11.4	11.2	12.7	11.0	-13.4%	5.4
Randolph	6.9	12.3	11.1	11.4	10.7	-6.1%	-4.5
Ripley	5.6	10.7	10.4	10.9	9.7	-11%	8.7
Rush	5.8	10.5	9.7	9.3	8.4	-9.7%	-4.8
Scott	6.4	13.5	11.3	11.5	10.5	-8.7%	5.3
Steuben	6.4	14.9	11.5	11.1	9.9	-1.8%	2.9
Sullivan	7.3	9.9	10.6	10.0	10.6	+6%	-1.3
Tipton	7.0	16.3	10.9	11.6	10.6	-8.6%	-3.9
Vermillion	6.8	11.9	12.4	13.1	12.5	-4.6%	-3.4
Wabash	7.3	13.8	10.7	9.8	9.1	-7.1%	-5.9
Warren	3.8	11.8	9.2	7.6	6.5	-14.5%	1.1
Warrick	4.9	7.9	8.1	7.7	7.4	-3.9%	13.9
Washington	6.9	13.2	9.4	11.7	10.5	-10.3%	3.8
White	4.9	11.0	9.9	10.1	9.1	-10%	-2.5
US Overall	**5.7**	**9.7**	**9.5**	**9.0**	**8.7**	**-3.3%**	**+9.7**
Indiana Overall	**5.7**	**10.6**	**10.1**	**9.5**	**8.8**	**-7.4%**	**+6.7%**
CAH Counties Overall	**6.1**	**12.2**	**10.4**	**10.5**	**9.7**	**-7.5**	**+1.7%**

Source: US Census Bureau. Retrieved from http://quickfacts.census.gov/qfd/states/18000.html

The counties served by a Critical Access Hospital have unemployment rates higher than the rest of the state and are less likely to increase in population.

According to the *Status of Working Families 2011* report, Indiana, unemployment trends are not equal in their distribution. In fact, males experience a lower unemployment rate than females (9.4% and 8.7% respectively). With regard to race, the unemployment rate of Hispanics is higher than that for whites; while the rate for African Americans is nearly double that of whites.

Other Measures of Economic Distress

The *Status of Working Families in Indiana 2011* report analyzes the general state of Indiana's economy as it relates to working families, its workforce, its struggle with maintaining livable wages, and subsequently, the state of poverty in Indiana. The report will focus on Indiana's status in a post-recessionary economy. To reference the 2011 report, visit: http://www.incap.org/statusworkingfamilies.html. Key findings contained within the report portray the economic struggles of Indiana's families. The data shows a recovery in Indiana marked by a weakened labor market, an unprecedented decline in wages, and dramatic increases in poverty. Due to across-the-board state budget cuts, a significant loss of public-sector jobs, and low uptake rates in work-support programs, tens of thousands of Hoosiers are experiencing the human toll of this recession.

- Indiana's jobs deficit, or the difference between the numbers of jobs Indiana currently has, and the number of jobs it needs to regain for pre-recession employment (2,987,200 jobs) is 231,500 jobs.

- From August 2008 through February 2012, state and local government jobs have decreased by 5.2 percent. This represents nearly 22 percent (21,200 jobs) of all jobs lost during the same time period. In a single month, from August 2010 to September 2010, Indiana shed nearly 10,000 state and local government jobs.

- Indiana is among 17 states that have continued to experience absolute declines in its labor force since the recession began.

- Only 14.6 percent of Hoosiers over the age of 25 have a bachelor's degree—ranking Indiana 42nd in the nation.

- Only 22.7 percent of Hoosiers over 25 years old have education beyond a bachelor's degree—ranking Indiana 43rd in the nation.

- Only 8.1 percent of Hoosier's over the age of 25 years possesses a graduate degree—ranking Indiana 39th in the nation.

- Of Indiana's neighboring states, only Kentucky offers those with bachelor's degrees lower wages. At $23.56 per hour, Indiana's median wages for those with a bachelor's degree are nearly $0.80 below the national average.

- Currently, Hoosiers now earn $0.85 on the dollar compared to the rest of the nation—Indiana ranks 41st in the nation.

- Median Household Income for Hoosiers fell by 13.6 percent in the past decade—from $51,650 to $44,613. This is the 2nd largest decrease in wages in the U.S. Only Michigan saw larger declines at 17.3 percent.

- The Median Family Income was $78,599 in 2000. In the last decade, it has decreased by 29.6 percent. It now stands at $55,368. This is also the 2nd largest decrease in the nation.

- Since 2000, Indiana has seen a 52 percent increase in poverty. This is the 6th highest increase in the nation. In 2010, Indiana's poverty rate was 15.3 percent (962,775 Hoosiers).

- Since 2000, Indiana has seen a 52 percent increase in child poverty—representing the 12th largest increase in the nation. In 2010, the child poverty rate was 21.7 percent (342,172 Hoosier children).

Figure 15 provides a snapshot of distribution among income-groups across the state. Most notably, Indiana lacks a sizable population of high-income earners—those above $100,000. Moreover, close to 60 percent of graduates exit the state.

Figure 15. Comparison of Income Group Distribution, US and Indiana, 2011.

Income Group Distribution, Indiana 2010	US	Indiana
Less than $10,000	7.6%	7.6%
$10,000 to $14,999	5.8%	5.9%
$15,000 to $24,999	11.5%	13.0%
$25,000 to $34,999	10.8%	12.5%
$35,000 to $49,999	14.2%	15.9%
$50,000 to $74,999	18.3%	19.2%
$75,000 to $99,999	11.8%	11.6%
$100,000 to $149,999	11.8%	9.7%
$150,000 to $199,999	4.2%	2.5%
$200,000 or more	3.9%	2.1%

Source: Economic Policy Institute Analysis of Current Population Survey Data

It is estimated that 16.2% of Indiana families are food insecure. Food insecurity is defined as the ISDA's measure of lack of access, at times, to enough food for an active, healthy life for all household members; limited or uncertain availability of nutritionally adequate foods. Based on national averages, about 29% of food insecure individuals are above 185% of the poverty line and are typically ineligible for most food assistance programs (Nord, Coleman-Jensen, Andrews, & Carlson, 2010). Indiana counties in which Critical Access Hospitals are located reflect an overall 16.7% food insecurity rating, higher than the state average. This can have significant

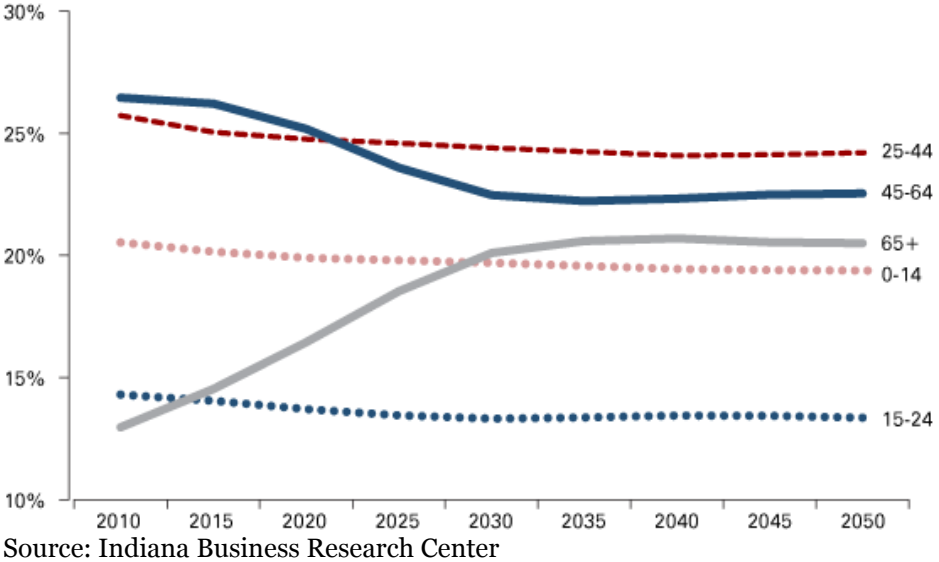
impact on health. Another measure of economic distress is the number of children receiving free and reduced lunches in the state.

Age

Population projections released by the Indiana Business Research Center (IBRC) at Indiana University's Kelley School of Business (2011) portray big changes on the horizon in the size, geographic distribution, and age composition of Indiana's population.

The dominant force behind Indiana's changing population dynamics is the aging baby boom generation. The first boomers hit age 65 in 2011 and the entire cohort will be of traditional retirement age by 2030. By that point, the senior population's share of the state total will jump from 13 percent in 2010 to 20 percent before beginning to level off (see Figure 16). All other age groups will see its share of total population decline over the same period.

Figure 16. Projected Share of Total Population by Age Group, 2010 to 2050.



Source: Indiana Business Research Center

While other age groups will lose market share in the coming decades, most will still grow. Both Indiana's child population (age 0 to 14) and its younger adult age group (25 to 44) will increase by roughly 75,000 residents by 2030 and those around college age will be up by 25,000. These gains, however, will be dwarfed by the projected 70 percent increase in the number of Hoosiers age 65 or older.

The movement of boomers into retirement age will cause a temporary decline in the state's older working-age population, which could have implications for the size of Indiana's labor force and the state's economic development prospects. However, any negative economic effects that may stem from a smaller labor force could be mitigated by the expected increase in labor force participation among older workers, productivity gains or higher than projected levels of net in-migration. (IBRC, 2012).

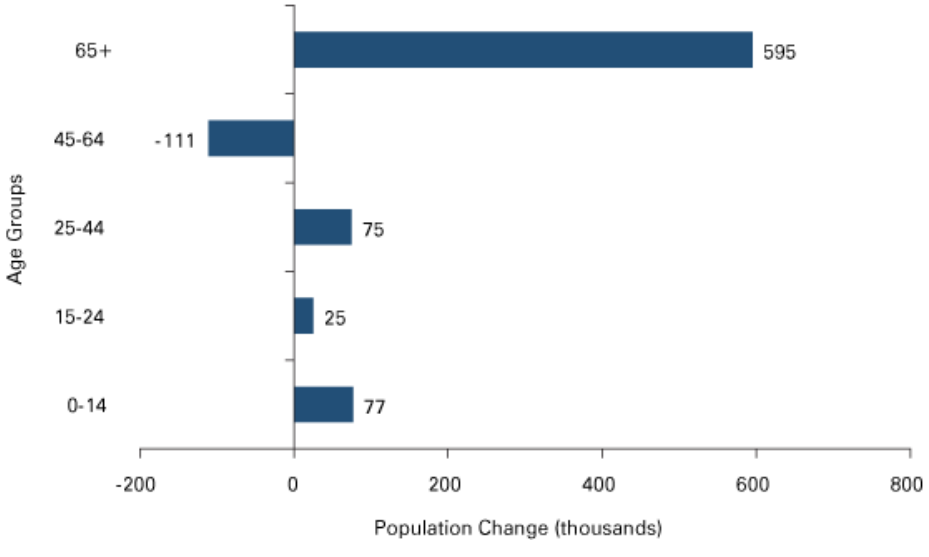
Labor Force

A potential labor shortage may hinder economic development efforts across much of Indiana over the next twenty years, according to new projections issued by the IBRC. Population in the prime working ages of twenty-five to fifty-four can be expected to shrink in seventy-three of Indiana's ninety-two counties between 2000 and 2020. This twenty-five to fifty-four age range could be considered the most economically productive in the entire life span, since labor force participation is typically highest at these ages. A large share of the population under age twenty-five is still focusing on education, while at age fifty-five and older, the impacts of early retirement and disability result in lower labor force participation rates.

Elderly

By 2035, Indiana is expected to have more residents age sixty-five or older than those under fifteen. At the beginning of the projection period, about one in eight Hoosiers had reached their sixty-fifth birthday. This proportion is expected to remain stable through 2010, but it will climb steadily after that point, reaching 21 percent in 2040. The population share under fifteen, by contrast, remains relatively stable throughout the entire projection period.

Figure 17. Projected Population Change by Age Group, 2010 to 2030.



Source: Indiana Business Research Center

Large swaths of mid-sized and rural communities in north, east and west-central Indiana are projected to shed residents over the next 40 years. Many counties in southwest Indiana are also likely to lose population. All told, 49 of Indiana's 92 counties are expected to see a population decline by 2050.

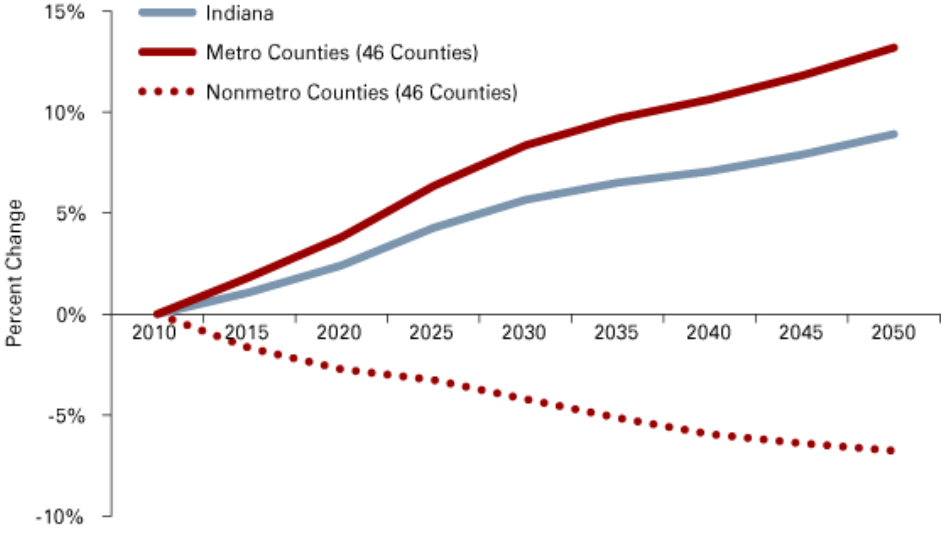
A net outflow is projected to continue in many of these counties, although at increasingly lower rates. At the same time, due to the aging population, declining natural increases in many counties will no longer mask net out-migration. In fact, many counties will begin to experience a natural decrease as deaths rise and continued net out-migration leads to a decline in births. Between

2010 and 2015, seven counties will likely have more deaths than births. By 2050, roughly 60 counties are projected to have a natural decrease.

Consequently, large regions of the state will age rapidly while families concentrate more and more in a handful of metropolitan areas. This shift was evident in the last decade when Indiana was one of only a few states in the Midwest and Northeast to see an increase in its population under the age of 18—yet all of these gains occurred in just 24 counties. Many counties in southwest Indiana are also likely to lose population.

This trend is expected to continue. **Figure 18** shows the projected change in the child population (age 0 to 14) for the state as well as for all counties in metropolitan statistical areas (MSAs) compared to those that are not. Led by the metro areas, Indiana should see steady increases in its child population while the state's mid-sized and rural counties as a group will see a 6.5 percent decline by 2050.

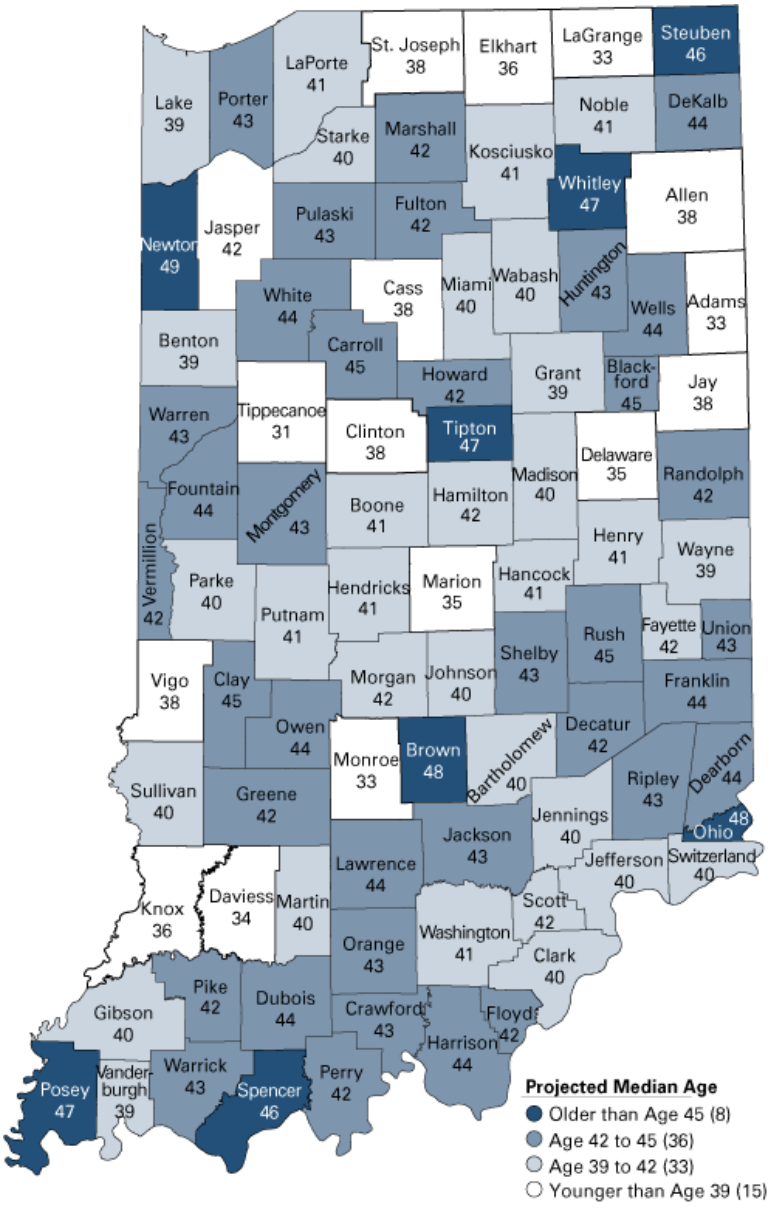
Figure 18. Projected Change in the 0-to-14 Age Group, 2010 to 2050.



Source: Indiana Business Research Center

As a result, there will continue to be wide differences in aging patterns around the state (see **Figure 19**). In 2000, only one county had a median age above 40 but that number jumped to 39 counties in 2010. The number of counties with a median age above 40 will top-out in 2040 when 74 counties are projected to be above that mark. Indiana's median age will increase steadily from 37.0 in 2010 to a peak of 39.1 in 2035. The state's median age will hold steady at this mark through 2050.

Figure 19. Projected Median Age of the Population by County, 2050.



Source: Indiana Business Research Center

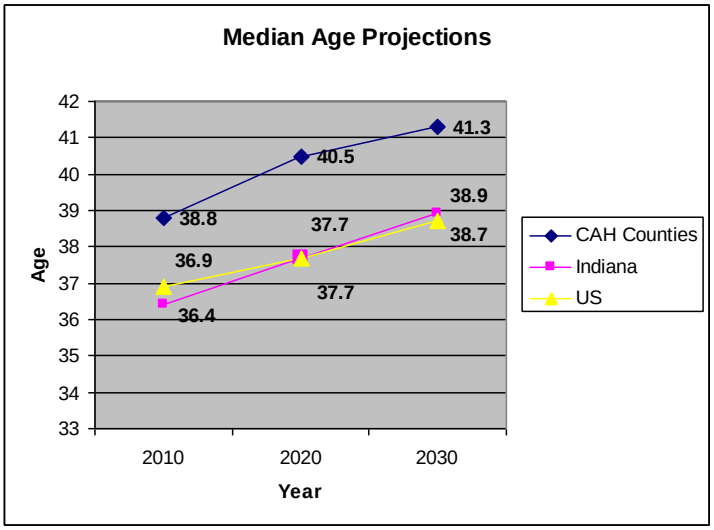
Figure 20 compares the projected median ages of populations within Indiana counties containing critical access hospitals with state and national figures. **Figure 20** graphically demonstrates that counties covered by Indiana's critical access hospitals are home to older and faster aging populations.

Figure 20. Comparison of Projected Median Age of Populations in CAH Counties.

County Location of Critical Access Hospital	Median Age 2010	Median Age 2020	Median Age 2030
Adams	33.5	33.3	33.0
Blackford	41.5	43.3	43.7
Clay	38.1	39.7	41.1
Clinton	36.5	37.4	37.9
Decatur	38.1	40.2	40.0
Fulton	40.5	42.2	42.7
Gibson	39.1	39.8	41.4
Greene	40.5	42.1	43.0
Harrison	39.4	42.1	44.4
Jasper	36.7	38.5	39.5
Jay	38.7	40.1	38.7
Jennings	36.7	38.7	39.7
LaGrange	30.8	32.1	32.5
Lawrence	41.4	43.6	44.2
Madison	39.9	41.2	41.9
Marshall	36.3	38.4	38.7
Miami	39.8	41.8	41.9
Orange	39.2	41.2	41.7
Perry	39.6	41.6	44.7
Pulaski	40.6	43.4	46.0
Putnam	36.7	38.6	39.8
Randolph	41.1	42.5	42.7
Ripley	37.8	39.4	39.8
Rush	40.8	42.8	41.2
Scott	37.6	40.9	42.7
Steuben	37.6	38.7	39.9
Sullivan	38.3	40.6	42.2
Tipton	41.8	44.4	45.0
Vermillion	41.3	43.1	44.4
Wabash	39.5	38.7	39.3
Warren	41.1	43.5	45.3
Warrick	39.5	40.9	42.7
Washington	38.2	40.8	42.4
White	40.2	41.2	40.8
US Overall	**36.9**	**37.7**	**38.7**
Indiana Overall	**36.4**	**37.7**	**38.9**
Critical Access Hospital Counties Overall	**38.8**	**40.5**	**41.3**

Source: Indiana Business Research Center, IU Kelley School of Business

Figure 21. Graph Comparing CAH Counties, Indiana, and US Projected Median Ages.



In general, Indiana is close to trend with United States median age statistics. The rural counties served by critical access hospitals include a population that is older and will be aging faster than the average, increasing the likelihood of medical care needs.

Persons with Disabilities

The presence of citizens with disabilities poses added considerations in terms of adaptive communities, specialized education and specialists in health care. Persons with disabilities may require more support for activities of daily living and find employment to be a great challenge in rural communities. Rural areas are more dependent on disability benefits than are metropolitan areas. Nationally, 4.6 percent of adults received disability benefits through Social Security. In rural America, 7.6 percent of adults receive these payments. In counties with small cities (between 10,000 and 50,000), 6.5 percent of adults qualify.

Indiana is home to a greater percentage of adults with disabilities than is true of the United States as a whole, 11.3% vs. 10.4% respectively as reported by adults aged 21– 64 (*Kaiser Family State Health Facts*, 2009). The following statistics indicate the social and economic status of non-institutionalized people with disabilities in the United States, using data from the 2008 American Community Survey (ACS) (Erickson & von Schrader, 2011), and summarized within the **2009 Disability Status Report: Indiana** published by the Cornell University Rehabilitation Research and Training Center on Disability Demographics and Statistics.

Age: In 2009, the prevalence of disability in Indiana was:

- 12.7 percent for persons of all ages
- 0.7 percent for persons ages 4 and under
- 5.7 percent for persons ages 5 to 15
- 5.7 percent for persons ages 16 to 20
- 11.3 percent for persons ages 21 to 64

- 27.2 percent for persons ages 65 to 74
- 52.7 percent for persons ages 75+

Disability Type: In 2009, the prevalence of the six disability types among persons of all ages in IN was:

- 2.0% reported a Visual Disability
- 3.7% reported a Hearing Disability
- 7.3% reported an Ambulatory Disability
- 4.9% reported a Cognitive Disability
- 2.4% reported a Self-Care Disability
- 5.4% reported an Independent Living Disability

Gender: In 2009, 13.0 percent of females of all ages and 12.4 percent of males of all ages in Indiana reported a disability.

Hispanic/Latino: In 2009, the prevalence of disability among persons of all ages of Hispanic or Latino origin in Indiana was 6.4%.

Race: In 2009, the prevalence of disability for working-age people (ages 21 to 64) was: 11% among Whites 16.2 % among Black /African Americans 3.7 % among Asians, 18.3 % among Native Americans, and 11.2% among persons of other race(s).

Employment: In 2009, the employment rate of working-age people (ages 21 to 64) with disabilities in Indiana was 36%, with 22% working full-time/full-year, and 13.2 % of unemployed people with disabilities actively looking for work.

Annual Earnings: In 2009, the median annual earnings of Indiana's working-age people with disabilities working full-time/full-year were $34,000.

Annual Household Income: In 2009, the median annual income of Indiana households with working-age people with disabilities was $34,800.

Poverty: In 2009, the poverty rate of working-age people with disabilities in Indiana was 25.6 percent.

Supplemental Security Income: In 2009, 15.6 % of working-age people with disabilities were receiving SSI payments in Indiana.

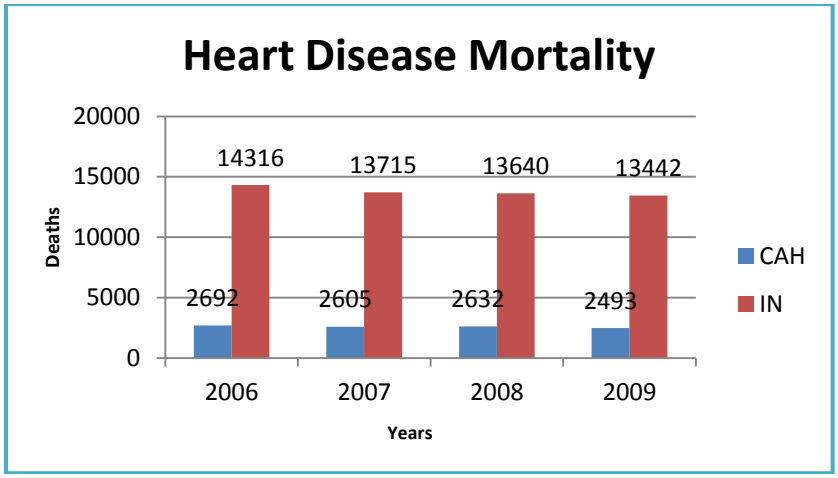
Educational Attainment: In 2009, the percentage of Indiana's working-age people with disabilities with only a high school diploma or equivalent was 39.7%; with only some college or an associate degree was 30.1%; with a bachelor's degree or more was 8.7%. This leaves approximately one-fourth of the population without a high school education.

Veterans Service-Connected Disability: In 2009, the percentage of working-age civilian veterans with a VA-determined Service-Connected Disability in Indiana was 15.6%.

Major Causes of Death

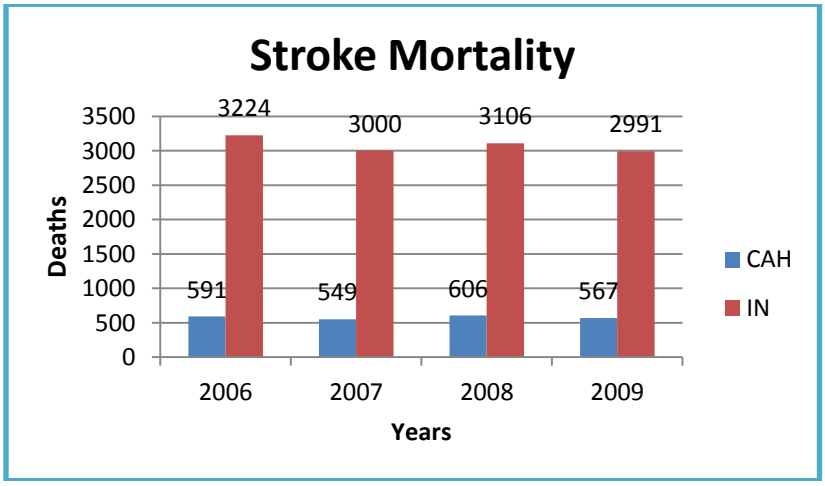
Deaths are disproportionately represented in rural areas. The Age-Adjusted Death Rate for all Hoosiers from all causes in 2009 was 813.86 per 100,000. The average Age-Adjusted Death Rates for Hoosiers living in the thirty-four rural counties in which a Critical Access Hospital is located was 848.38 per 100,000. The thirty-four rural counties in which a Critical Access Hospital is located represent approximately 37% of Indiana's 92 counties, but combine represent only 17% of the state's population (U.S. Census, 2009). The following series of graphs represent mortality from various chronic diseases over the period of 2006-2009. Clearly, the death figures from the CAH counties surpass the expected 17% of the total number of deaths from stroke, cancer, diabetes, and chronic lower respiratory disease when compared to Indiana as a whole.

Figure 22. Heart Disease Mortality 2006-2009.



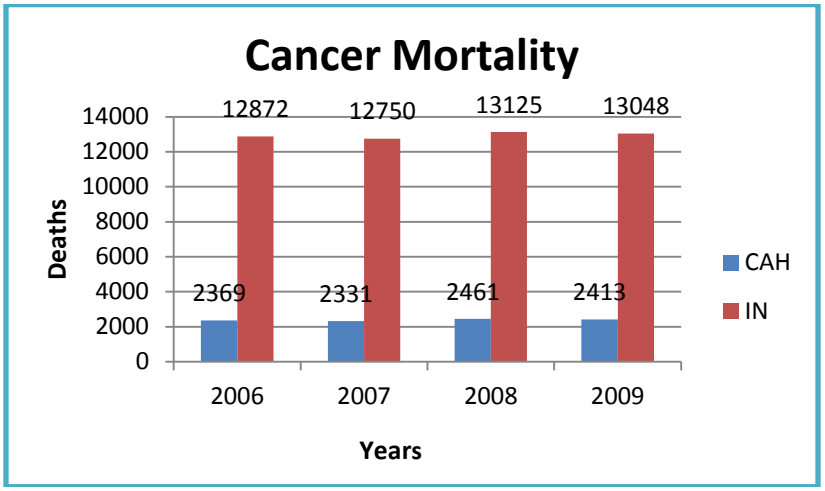
Source: Indiana State Department of Health www.in.gov/isdh

Figure 23. Stroke Mortality 2006-2009.



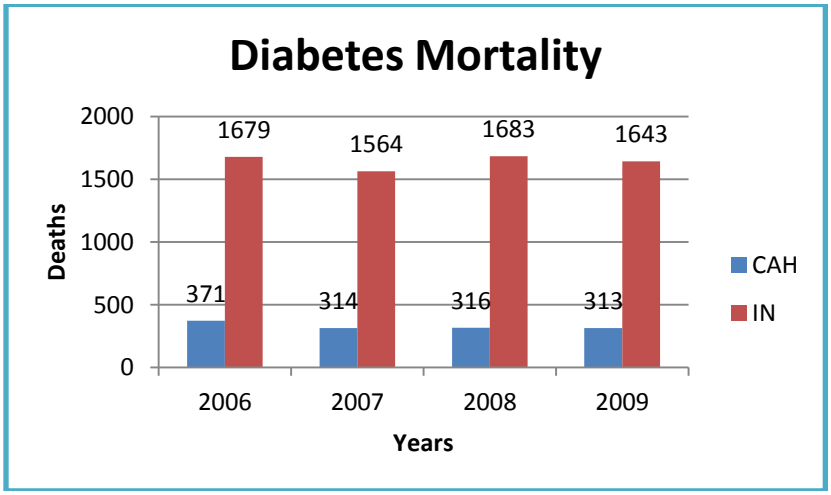
Source: Indiana State Department of Health www.in.gov/isdh

Figure 24. Cancer Mortality 2006-2009.



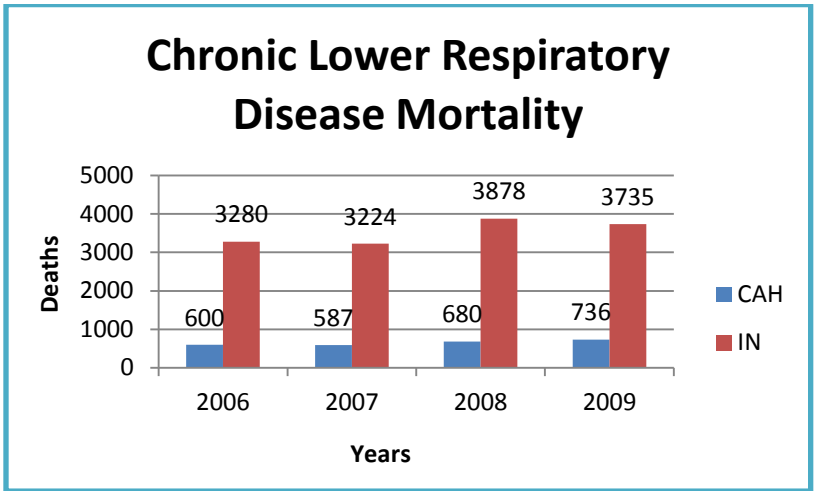
Source: Indiana State Department of Health www.in.gov/isdh

Figure 25. Diabetes Mortality 2006-2009.



Source: Indiana State Department of Health www.in.gov/isdh

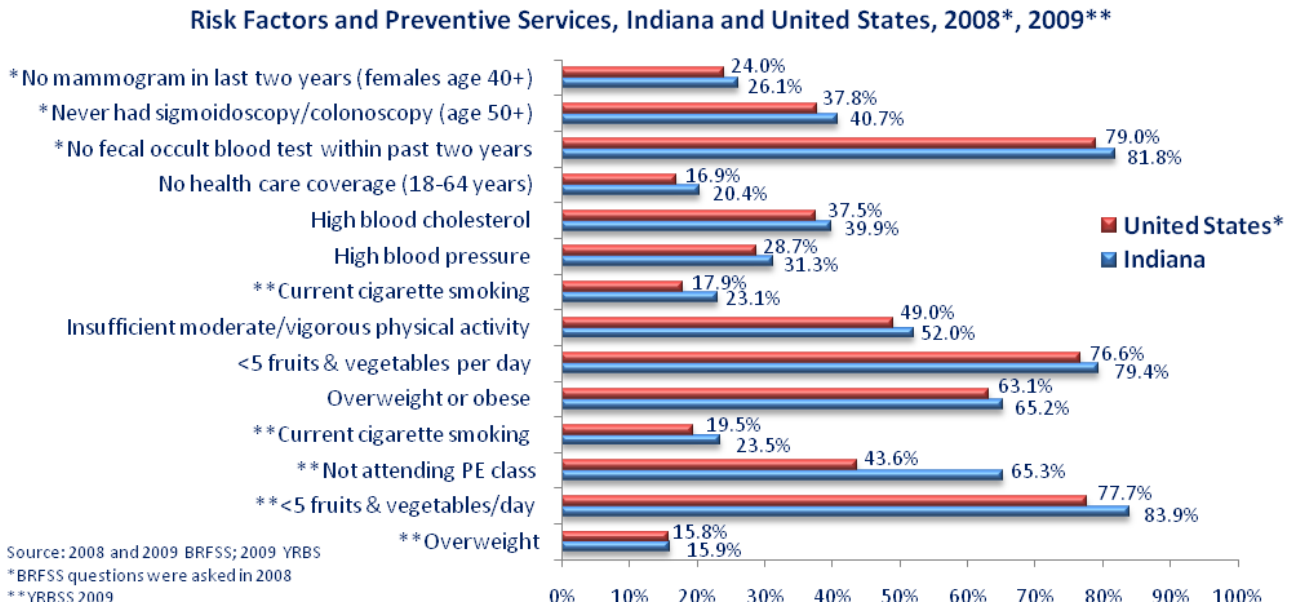
Figure 26. Chronic Lower Respiratory Mortality 2006-2009.



Source: Indiana State Department of Health www.in.gov/isdh

These deaths could be related to the poor scorecard that Indiana has with regard to prevention of chronic disease. See **Figure 27** below.

Figure 27. Risk Factors and Preventive Services, Indiana and United States.



Rural Population Summary

Indiana as a whole reflects economic distress as expressed in job losses, lower levels of net migration, high rates of home foreclosures and food stamp participation. The state's population is aging, and the state as a whole is not expected to gain or retain a high infusion of young people

in the near future. Indiana's rural citizens are likely to be older and to die of chronic diseases so prevalent in the state. They are poorer and less likely to have sufficient insurance coverage.

Implications for health providers in Indiana's rural counties are that economic conditions are contributing to difficult decisions within families in terms of choosing healthy food, undertaking preventive health care options, and buying all prescribed medications. The population is older and with a prevalence of higher rates of disability and chronic disease; they will require higher levels of care with greater sophistication of service array. These multiple factors increase the likelihood of more frequent critical health incidents requiring emergency services which will increase the burden for Indiana's critical access hospitals. The effect of this burden intensifies as those seeking treatment at CAHs become increasingly dependent on Medicaid, Medicare and charity care—none of which allows a hospital to recover all of its cost for service provided.

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Section II. Providers of Care: Critical Access Hospitals, FQHCs, CHCs

The Medicare Rural Hospital Flexibility Program

The Medicare Rural Hospital Flexibility Program (Flex Program), created by Congress in1997, allows small hospitals to be licensed as Critical Access Hospitals (CAHs) and offers grants to States to help implement initiatives to strengthen the rural health care infrastructure. To participate in the Flex Program, States are required to develop a rural health care plan that provides for the creation of one or more rural health networks, promotes regionalization of rural health services in the State, and improves the quality of and access to hospital and other health services for rural residents of the State. Consistent with their rural health care plans, states may designate eligible rural hospitals as CAHs.

CAHs must be located in a rural area or an area treated as rural; be more than 35 miles (or 15 miles in areas with mountainous terrain or only secondary roads available) from another hospital, or be certified before January 1, 2006 by the State as being a necessary provider of health care services. CAHs are required to make available 24-hour emergency care services that a State determines are necessary. CAHs may have a maximum of 25 acute care and swing beds, and must maintain an annual average length of stay of 96 hours or less for their acute care patients. CAHs are reimbursed by Medicare on a cost basis (i.e., for the reasonable costs of providing inpatient, outpatient, and swing bed services).

The legislative authority for the Flex Program and cost-based reimbursement for CAHs are described in the Social Security Act, Title XVIII, Sections 1814 and 1820, available at http://www.ssa.gov/OP_Home/ssact/title18/1800.htm.

Indiana's Critical Access Hospitals

Currently, 35 Critical Access Hospitals are certified in Indiana. Based upon data supplied by the Flex Monitoring Team in their publication *Community Benefit Activities of Critical Access Hospitals, Non-Metropolitan Hospitals, and Metropolitan Hospitals: National and Indiana Data* (Race, Gale, & Coburn, 2010), Indiana Critical Access Hospitals outperform both non-metropolitan and metropolitan hospitals in twelve measures:

1. Has a long-term plan for improving the health of the community
2. Provides adult day care
3. Provides home health services
4. Has a mission statement that includes a focus on community benefit
5. Provides support for community building activities
6. Makes financial contributions, provides in-kind support, or participates in fund-raising for community programs not directly affiliated with the hospital
7. Uses health status assessments to identify unmet needs, excess capacity, or duplicative services in the community
8. Works with other providers to collect, track, and communicate clinical and health information across cooperating organizations
9. Community outreach

10. Health fairs
11. Health screenings
12. Immunization programs

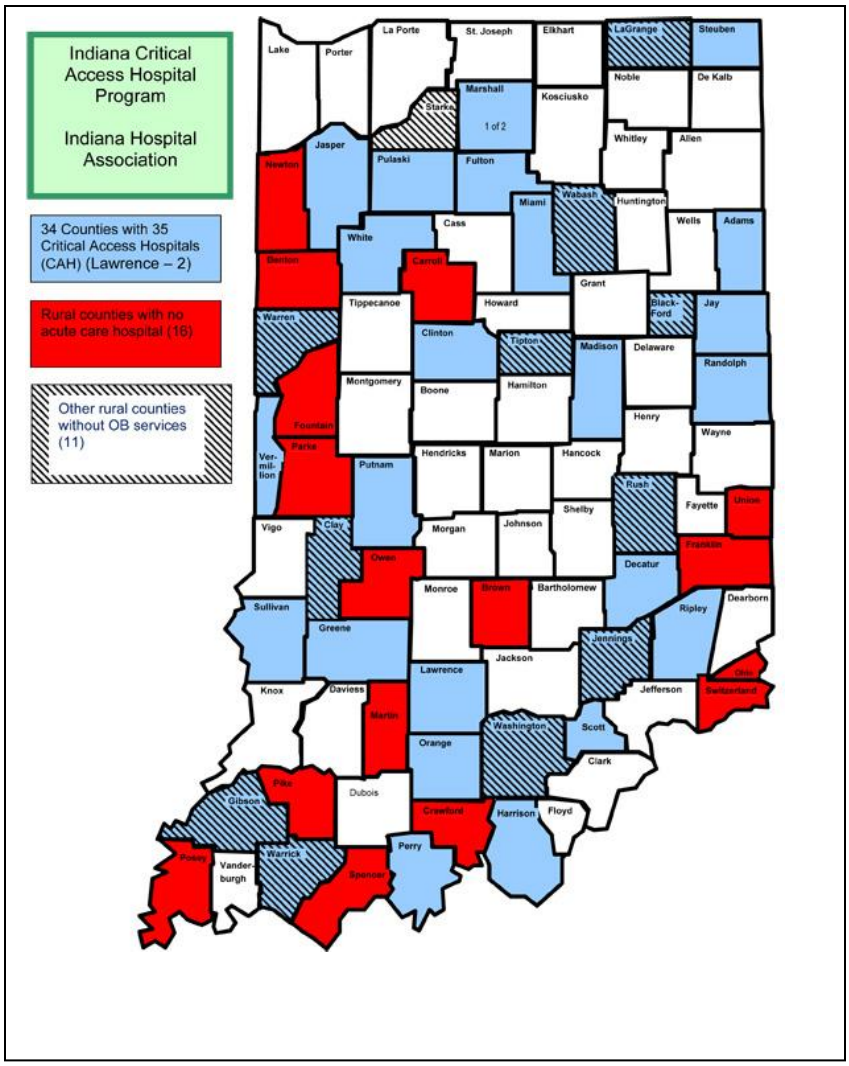
It is obvious that Indiana's Critical Access hospitals are sensitive to the needs of the community and see themselves as members of the communities that they serve. There are no non-certified CAHs that receive funding under the Small Rural Hospital Improvement Grant Program. Currently, 33 of the 35 CAHs within Indiana receive funding through the Small Rural Hospital Improvement Grant Program. The office has been reaching out to the non-participating CAHs and is hopeful 34 hospitals will participate in the upcoming year. The sustained interest in the Small Rural Hospital Improvement Grant program indicates the strength of relationships between SORH and the CAHs. The following chart lists Indiana's Critical Access Hospitals, their locations, and number of beds.

Figure 28. List of Critical Access Hospitals, Locations, and Number of Beds (2012).

Name	City	State	Zip	Beds
Adams Memorial Hospital	Decatur	Indiana	46733	25
Cameron Memorial Community Hospital	Angola	Indiana	46703	25
Community Hospital of Bremen	Bremen	Indiana	46506	24
Dukes Memorial Hospital	Peru	Indiana	46970-1698	25
Gibson General Hospital	Princeton	Indiana	47670-1043	25
Greene County General Hospital	Linton	Indiana	47441-9457	25
Harrison County Hospital	Corydon	Indiana	47112	25
Indiana University Health Bedford Hospital	Bedford	Indiana	47421	25
Indiana University Health Blackford Hospital	Hartford City	Indiana	47348	15
Indiana University Health Paoli Hospital	Paoli	Indiana	47454-0499	25
Indiana University Health Tipton Hospital	Tipton	Indiana	46072	25
Indiana University Health White Memorial	Monticello	Indiana	47960	25
Jasper County Hospital	Rensselaer	Indiana	47978	25
Jay County Hospital	Portland	Indiana	47371-1322	25
Margaret Mary Community Hospital	Batesville	Indiana	47006	25
Parkview LaGrange Hospital	LaGrange	Indiana	46761	25
Perry County Memorial Hospital	Tell City	Indiana	47586	25
Pulaski Memorial Hospital	Winamac	Indiana	46996	25
Putnam County Hospital	Greencastle	Indiana	46135	25
Rush Memorial Hospital	Rushville	Indiana	46173	25
Scott Memorial Hospital	Scottsburg	Indiana	47170	25
St. Mary's Warrick Hospital	Boonville	Indiana	47601	25
St. Vincent Clay Hospital	Brazil	Indiana	47834-2675	25
St. Vincent Dunn Memorial Hospital	Bedford	Indiana	47421	25
St. Vincent Frankfort Hospital	Frankfort	Indiana	46041	25
St. Vincent Jennings Community Hospital, Inc.	North Vernon	Indiana	47265	25

St. Vincent Mercy Hospital	Elwood	Indiana	46036	25
St. Vincent Randolph Hospital	Winchester	Indiana	47394	25
St. Vincent Salem Hospital	Salem	Indiana	47167	15
St. Vincent Williamsport Hospital	Williamsport	Indiana	47993-0215	16
Sullivan County Community Hospital	Sullivan	Indiana	47882	25
Wabash County Hospital	Wabash	Indiana	46992	25
Union Hospital Clinton	Clinton	Indiana	47842-0349	25
Wabash County Hospital	Wabash	Indiana	46992	25
Woodlawn Hospital	Rochester	Indiana	46975	25

Figure 29. Critical Access Hospital Locations, Counties with No Hospitals.



Source: Indiana Hospital Association 2009

Performance Data

Comparative data on the financial condition and performance of hospitals is beneficial to the hospitals and to the SORH office. The most current available financial comparison data is from

calendar year 2009. Below are the performance dimensions and indicators that reflect how Indiana performed compared to the rest of the nation.

Profitability indicators measure the ability of the organization to generate the financial return required to replace assets, and meet increases in services demands.

- Total margin- the control of expenses relative to revenues
- Cash flow margin- the ability to generate cash flow from providing patient care services
- Return on equity- the net income generated by equity investment (net assets)

Figure 30. CAH Return on Equity.

	% total margin	% cash flow margin	% return on equity
US	1.89	5.65	4.55
IN	3.08	9.00	5.70

Source: Flex Monitoring Team. 2010

Liquidity indicators measure the ability of an organization to meet its cash obligations in a timely manner.

- Current ratio- the number of times short-term obligations can be paid using short-term assets
- Days cash on hand- the number of days an organization could operate if no cash was collected or received
- Days revenue in accounts receivable- the number of days it takes an organization to collect its receivables

Figure 31. Critical Access Hospital Liquidity Indicators.

	Current ratio	Days cash on hand	Days revenue in accounts receivable (lower is better)
US	2.26	65.94	53.45
IN	2.99	72.61	45.95

Source: Flex Monitoring Team, 2010

Capital structure indicators measure the extent to which an organization uses debt and equity financing.

- Equity financing- the percentage of total assets financed by equity
- Debt service coverage- the ability to pay obligation related to long-term debt, principal payments, and interest expense
- Long-term debt to capitalization- the percentage of total capital that is debt

Figure 32. Critical Access Hospital Capital Structure Indicators.

	Equity financing	Debt service coverage	Long-term debt to capitalization
US	60.55	2.42	26.52
IN	59.96	3.04	30.48

Source: Flex Monitoring Team, 2010

Revenue indicators measure the amount and mix of different sources of revenue

- Outpatient revenues to total revenues- the percentage of total revenues that are for outpatient revenues
- Patient deductions- the allowances and discounts per dollar of total outpatient revenues
- Medicare inpatient payer mix- the percentage of total inpatient days that are provided to Medicare patients
- Medicare outpatient payer mix- the percentage of total out-patient charges that are for Medicare patients
- Medicare outpatient cost to charge- outpatient Medicare costs per dollar of outpatient Medicare charges
- Medicare revenue per day- the amount of Medicare revenue earned per Medicare day

Figure 33. Critical Access Hospital Revenue Indicators.

	Outpatient revenues to total revenues	Patient deductions	Medicare inpatient payer mix	Medicare outpatient payer mix	Medicare outpatient cost to charge	Medicare revenue per day
US	70.33	36.02	73.09	35.80	0.48	1762
IN	77.23	48.50	65.97	32.51	0.35	1804

Source: Flex Monitoring Team, 2010

Cost indicators measure the amount and mix of different types of costs

- Salaries to patient revenue measures the percentage of patient revenue that are labor costs.
- Average age of plant- the average age in years of the fixed assets of an organization
- FTEs per adjusted occupied bed- the number of full-time employees per each occupied bed

Figure 34. Critical Access Hospital Cost Indicators.

	Salaries to net patient revenue	Average age of plant	FTEs per adjusted occupied bed
US	44.66	9.88	5.75
IN	38.76	7.31	5.11

Source: Flex Monitoring Team, 2010

Utilization indicators measure the extent to which fixed assets are fully occupied

- Average daily census swing-SNF beds- the average number of swing-SNF beds occupied per day
- Average daily census acute beds- the average number of acute care beds occupied per day

Figure 35. Critical Access Hospital Utilization Indicators.

	Swing-SNF beds	Acute beds
US	1.61	4.20
IN	1.48	8.60

Source: Flex Monitoring Team, 2010

Indiana will use hospital specific data to target areas of concern and launch quality improvement initiatives.

The SORH understands the importance of CAH financial feasibility, not only for the hospital, but the community as well. SORH will work with CAH financial experts to provide training opportunities for CAH CEOs and CFOs. Information concerning cost reporting, allocated costs, variable costs, and CAH economics will be disseminated to the CAHs. Indiana also recognizes the importance of CAHs participating in the CMS Hospital Compare program. The SORH has taken steps to increase the number of CAHs reporting to Hospital Compare and increase the number of core measures reported.

Indiana continues to encourage and support the Hospital Compare submission of data. In Indiana, 29 of the 35 CAHs in 2010 reported data to Hospital Compare on at least one inpatient process of care measure for 2010 discharges (**Figure 36**). The Indiana participation rate of 82.9% was higher than the national rate of 73.5%. The Indiana rate remained unchanged from 2007 to 2010.

Figure 36. CAH Participation in Hospital Compare in Indiana and Nationally, 2005-2009.

	# % participating					
	2005	2006	2007	2008	2009	2010
Indiana	24 (66.7%)	25 (71.4%)	29 (82.9%)	29 (82.9%)	29 (82.9%)	29 (82.9%)
National	678 (53.4%)	812 (63.1%)	892 (69.1%)	914 (70.3%)	943 (71.9%)	977 (73.5%)

Source: Flex Monitoring Team, 2010

The following table compares inpatient process of care results for discharges of Indiana CAHs with a comparison to national CAH data. Values in red indicate percentages that are lower than those of the previous year.

Figure 37. Hospital Compare Results for Discharges for CAHs in Indiana and Nationally, 2008-2010.

	Measure	Indiana % of CAH patients receiving recommended care n=29 all years			National Percent of CAH patients receiving recommended care n=918 n=933 n=977		
		2008	2009	2010	2008	2009	2010
AMI	Aspirin at arrival	88.90%	93.2%	96.7%	90.60%	92.1%	93.1%
	Aspirin at discharge	92.20%	96.6%	97.5%	88.60%	90.2%	90.8%
	ACEI or ARB for LVSD	93.20%	95.1%	79.3%	84.80%	87.4%	84.3%
	Smoking cessation advice	96.20%	93.8%	90.6%	80.80%	89.7%	82.7%
	Beta blocker at discharge	94.40%	96.7%	96.8%	88.50%	90.5%	90.6%
Heart Failure	Discharge instructions	76.20%	82.4%	85.8%	71.30%	75.5%	79.8%
	Assessment of LVS	87.40%	89.0%	91.2%	80.00%	82.7%	84.3%
	ACE inhibitor or ARB for LVSD	86.90%	89.3%	88.3%	83.80%	84.7%	85.9%
	Smoking cessation advice	88.20%	94.1%	96.8%	83.30%	85.6%	86.7%
Pneumonia	Pneumococcal vaccination	86.10%	89.3%	90.3%	82.70%	85.9%	86.8%
	Blood culture prior to first antibiotic	89.10%	88.6%	92.6%	90.70%	92.0%	93.6%
	Smoking cessation advice	88.90%	91.5%	93.5%	83.00%	86.2%	88.3%
	Initial antibiotic(s) within 6 hours	95.00%	95.8%	96.6%	94.40%	95.0%	95.4%
	Most appropriate initial antibiotic(s)	87.10%	86.7%	89.5%	86.90%	87.4%	88.7%
	Influenza vaccination	77.60%	86.9%	85.9%	79.90%	83.1%	85.6%
Surgical Care Improvement	Preventative antibiotic(s) 1 hour before incision	90.10%	94.4%	91.9%	88.40%	91.6%	92.9%
	Received appropriate preventative antibiotic(s)	95.00%	96.5%	95.2%	94.70%	96.0%	96.7%
	Preventative antibiotic(s) stopped within 24 hours after surgery	85.70%	87.7%	92.5%	86.50%	91.2%	93.6%
	Doctors ordered blood clot preventative treatments	86.90%	86.2%	90.8%	87.70%	88.6%	90.6%
	Received blood clot prevention treatment 24 hours pre/post surgery	84.70%	84.1%	91.1%	86.00%	87.7%	89.7%

Source: Flex Monitoring Team, 2009; 2010, 2011

The quality measures cited above indicate that on 15 of the 20 measures, Indiana's CAHs improved when comparing data from 2009 to that of 2010. Indiana performed better on 75% of the measures when compared to aggregate scores of CAHs nationally.

Critical Access Hospitals Summary

Indiana's Critical Access Hospitals provide a tremendous contribution toward the health and well-being of the citizens of their respective counties and in some cases for those of neighboring rural counties without hospitals of their own. Clearly, the ability of Indiana's Critical Access Hospitals to generate cash flow from providing patient care services is more constrained and has in all likelihood deteriorated due to increased economic distress within the counties they serve. Yet, the ability of these hospitals to efficiently collect receivables and to manage cash is laudable.

Indiana's CAH administrators are dedicated to quality performance and improvement as demonstrated by their participation in data collection efforts and ongoing training and technical assistance efforts. A continuation of support for data coordination, financial expertise development, information management for forecasting, and informed management decision-making will continue to be necessary as these hospitals cope with the changing landscape of the state economy, workforce, population trends, technology and aging physical plants. Collaboration and networking will continue to be key to their viability.

Indiana's Community Health Centers

Indiana has State-Funded Community Health Centers which receive operating monies from tobacco settlement funds received by the state, and Federally Qualified Health Centers (FQHC). The FQHCs are funded primarily through the Bureau of Primary Health Care (BPHC), part of the US Department of Health and Human Services, and they may also receive state money from the tobacco settlement. In total, there are 48 Community Health Centers in Indiana, 19 of which are FQHCs.

The Centers are public or private not-for-profit organizations that provide some or all of the following services depending on the need and support within the specific local Indiana community:

- Primary medical care
- Diagnostic laboratory and radiological services
- Preventive services including: prenatal and perinatal services, cancer and other disease screenings, well child services, immunizations against vaccine-preventable diseases, screenings for elevated blood lead levels, cholesterol testing, etc.
- Eye, ear and dental screening for children
- Voluntary family planning services
- Preventive dental services
- Emergency medical services
- Pharmaceutical services as appropriate to the particular Center
- Referrals to other providers of medical and health-related services including substance abuse and mental health services
- Patient case management services, including referral, follow-up, and eligibility assessment for and gaining access to Federal, State, and local support and financial programs for various medical, social, and related services

- Enabling services including outreach, transportation, translation, etc.
- Education about health services availability and appropriate use.

Community Health Centers are characterized by five essential elements that differentiate them from other providers:

- They must be located in or serve a documented high-need community. Designations, each with its own specific criteria, include Medically Underserved Areas (MUAs), Medically Underserved Populations (MUPs), and Health Professional Shortage Areas (HPSAs).
- They must provide comprehensive primary care services, as well as supportive / enabling services such as translation and transportation that promote access to care;
- Their services must be available to all residents of their service areas regardless of income status, with fees formally adjusted for patients' ability to pay;
- They must be governed by a Community Board that includes a majority of members who are Center patients ("consumers"); and,
- They must meet specific performance and accountability requirements for administrative, clinical, and financial operations.

The following data summarizes the contributions of the FQHCs and State-funded community health centers in meeting the health needs of Indiana. The most recent data available is from 2008.

Federally Qualified Health Centers and Community Health Centers

*****Data provided by the Indiana Primary Health Care Association. Retrieved June 11, 2012 from http://www.indianapca.org/aboutchcs/factsandfigures.html.

The Health Care Need in Indiana

(Estimated State Population, 2007-08: 6,376,792)

Estimated Persons < 133% Poverty:	1,428,000
Estimated Uninsured Persons:	734,600
Estimated Homeless Persons:	7,395

Availability of Services (2008)

(Based on responses from all Federally Qualified Health Centers and State-Funded Centers)

Total Number of Persons Served by All Responding Primary Health Care Sites:	399,560
Total Number of Persons Served by FQHCs:	216,079
Persons Enrolled in Medicaid (Dec. 2008):	766,500
Persons Enrolled in Medicaid Served by Responding Primary Health Care Sites:	142,210
Uninsured Persons Served by Responding Primary Health Care Sites:	132,052

*Indiana's Federally Qualified Health Centers 2008 Summary**
(19 FQHCs at time of data collection)
*One FQHC did not provide 2008 data; therefore, its 2007 data was included.

Funding Sources	
Private Pay	$24,595,682
Medicaid	$48,155,920
Medicare	$5,484,746
Private Insurance	$8,234,147
329/330/340	$21,615,617
State	$18,213,853
City/County	$1,826,554
Private Foundations	$4,842,354
Donations/Other	$8,664,845
Other Public	$1,080,924
TOTAL FUNDS	**$142,714,642**

Patient Income Levels	
At/Below Poverty	107,018
101 – 150% Poverty	23,571
151 – 200% Poverty	6,833
200% + Poverty	7,022
Unknown	71,635
TOTAL	**216,079**

Insurance	
Medicaid	87,335
Medicare	11,052
Uninsured	89,134
Other	28,137
Unknown	421
TOTAL	**216,079**

Race & Ethnicity	
White, Non-Hispanic	111,222
Black, Non-Hispanic	48,951

Hispanic, All Races	39,237
American Indian	321
Asian/Pacific Islander	2,526
Unknown	13,822
TOTAL	**216,079**

Patient Age	
0 – 14 Years	73,795
15 – 19 Years	17,506
20 – 44 Years	78,189
45 – 64 Years	38,118
65 And Over	8,471
Unknown	0
TOTAL	**216,079**

*Indiana's State-Funded-Only Health Centers 2008 Summary**
*Three centers did not provide 2008 data; therefore, their 2007 data was included.

Funding Sources	
Private Pay	$1,826,010
Medicaid	$4,152,364
Medicare	$1,677,245
Private Insurance	$2,591,641
329/330/340	$0
State	$5,220,535
City/County	$992,027
Private Foundations	$421,887
Donations/Other	$1,359,939
Other Public	$139,218
TOTAL FUNDS	**$18,380,866**

Patient Income Levels*	
At/Below Poverty	20,279
101 – 150% Poverty	11,577
151 – 200% Poverty	6,293
200% + Poverty	7,481

Unknown	105,677
TOTAL	**151,307**

* Please note: not all State-funded-only health centers provided complete patient income information.

Insurance	
Medicaid	54,875
Medicare	27,334
Uninsured	42,918
Other	56,204
Unknown	2,150
TOTAL	**183,481**

Race & Ethnicity	
White, Non-Hispanic	95,293
Black, Non-Hispanic	45,099
Hispanic, All Races	28,234
American Indian	104
Asian/Pacific Islander	891
Unknown	13,860
TOTAL	**183,481**

Patient Age	
0 – 14 Years	59,370
15 – 19 Years	16,887
20 – 44 Years	46,999
45 – 64 Years	41,090
65 And Over	15,644
Unknown	3,491
TOTAL	**183,481**

It is clear that these health centers meet a huge need for primary and preventive care in the state. Community Health Centers (CHCs) are a major component of America's health care safety net, providing high quality primary health care to low-income citizens, the uninsured, and other vulnerable populations. Indiana's 48 Community Health Centers serve as "health care homes" for residents in more than 50 of the 92 counties in Indiana.

Section III. The Need for Health Professionals

Note: The following workforce information segment is an excerpt from an **Issue Brief: Indiana's Health Professions Workforce Shortages & Maldistribution** (2007), by the Workforce & Workforce Development Subcommittee of the Indiana University Health Care Reform Study Group.

"The impending health care and human services workforce shortage is a national concern that is growing more urgent every day. The U.S. Department of Labor's Bureau of Labor Statistics (BLS) predicts that health care and social assistance will be the fastest growing industry. Between 2006 and 2016, a high percentage of growth is projected for a broad range of health and human services occupations in non-metropolitan counties: the need for personal and home care aides will increase by 50.6 percent; medical assistants will increase by 35.4 percent; and pharmacy technicians will increase by 32.0 percent. The Committee has noted over the years that the presence of a skilled workforce is the foundation for further development of a quality health and human services delivery system. Rural areas, in particular, are in need of more qualified workers across the full range of health and human services professions to provide adequate services for their citizens. Meeting service needs will also help economic development, by keeping stable jobs in rural communities.

As people born in the baby boomer generation retire and leave the workforce, the available pool of health and human services workers will shrink, since fewer people were born during the successive years. The lack of an adequate workforce is magnified in rural areas because the elderly population is growing more rapidly in rural than in urban areas. With an influx of baby boomers retiring to rural areas, rural America is experiencing a disproportionately large and growing elderly population—a population that often needs more health care and human services, which places a greater demand on the workforce. Compounding this problem is an out-migration of talented youth from some rural areas in search of broader educational and job opportunities. In the face of expected workforce shortages, maintaining a qualified workforce that can adequately meet the needs of the community poses some challenges for many rural areas.

Shortages in Indiana

Many communities across the state experience a shortage of health professionals in most disciplines from medical assistants to medical doctors. Many of the communities with the most serious shortages also experience the most poverty and the poorest health status. These communities increase the health care cost in our state because the individuals in those communities tend to wait to access healthcare until it is urgent and tend to access healthcare in the most expensive and least effective way -- through hospital emergency rooms. The costs incurred in this fashion are often covered by Medicaid, resulting in an increased tax burden, or remain uncompensated to the hospitals, resulting in unavoidable shifting of costs, which increases medical premiums for businesses and their employees. These medically underserved communities, which suffer from health professional shortages, can exist anywhere, but tend to be concentrated in rural communities and urban inner city areas where there are economically disadvantaged individuals. Despite the poverty in these areas that may make the communities appear unattractive to some health professionals, there are many strategies to recruit students to practice in medically underserved communities. Evidence shows that the strongest predictor of

where a health professional will practice is where that health professional came from, validating the supposition that those who practice in medically underserved communities are most likely to have come from underserved populations. However, evidence also shows that students from underserved backgrounds are less likely to enter higher education and health professions training programs than their economically advantaged counterparts, unless they are equipped to overcome the educational and financial barriers that they face.

The supply of health professionals varies greatly based on certain geographic, demographic and socioeconomic factors resulting in a mal-distribution of health professionals across the state of Indiana. Health professionals are more likely to be concentrated in areas of economic affluence and less likely to be concentrated in areas where the population is less dense. These are also areas where the population has higher proportions of low income and racial and ethnic minorities. Medically underserved populations suffer disproportionately from poorer health status and higher health care costs because of their lack of access to primary and preventive care. These disparities are due to many factors, but are certainly due in part to lack of health coverage and an insufficient numbers of providers. Disparities are most prevalent in Indiana's urban inner cities and rural areas."

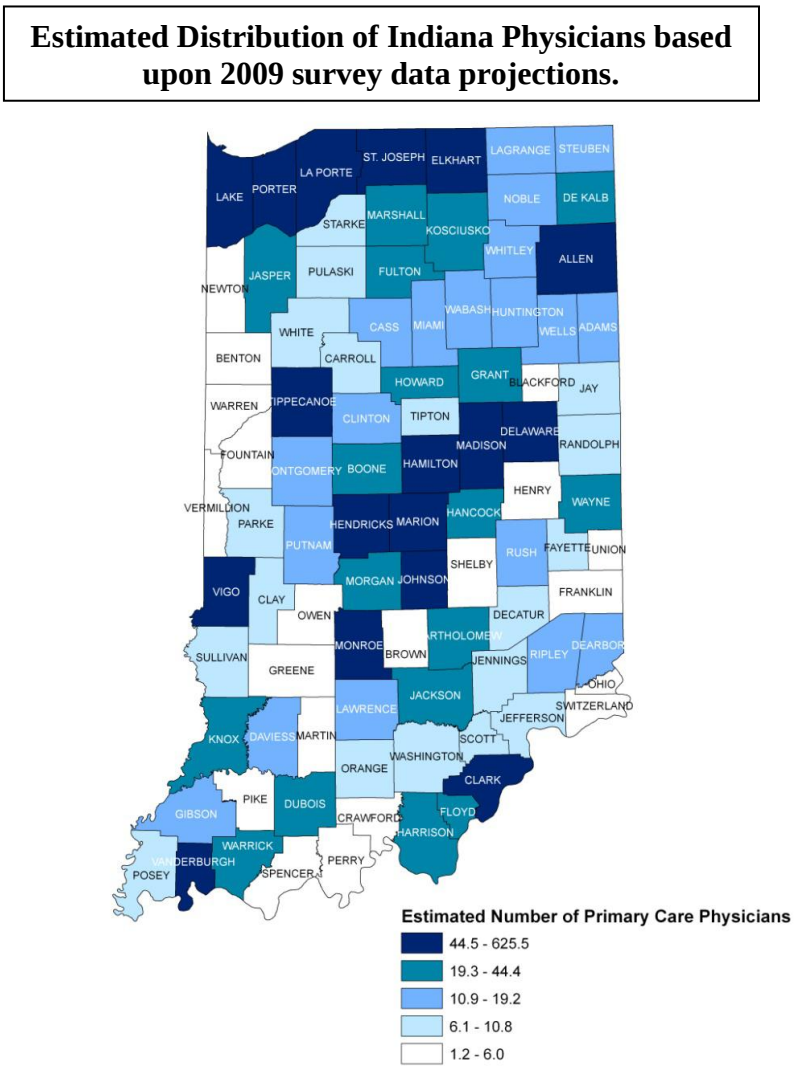
Figure 38 provides a profile of the Indiana physician workforce, based upon 2010 data from the State Physician Data book prepared by the AAMC Center for Workforce Studies (2011).

Figure 38. Indiana Physician Workforce Profile.

Physician Supply			
	Indiana	IN Rank	State Median
Active Physicians per 100.000 population, 2010	215.7	38	244.2
Total Active Patient Care Physicians per 100,000 Population, 2010	194.5	34	215.1
Active Primary Care Physicians per 100,000 Population, 2010	77.8	38	91.0
Active Patient Care Primary Care Physicians per 1000.000 Population, 2010	71.2	36	80.4

Not only is Indiana ranked below the average of the other states, the distribution of physicians within the state clearly benefits metropolitan areas over rural ones. The following map, displays the *estimated* number of physicians by county based on physician re-licensure application survey respondents' principal practice location. To make the data representative of the actual physician population in each county, the number of physicians in each county was adjusted (weighted) for the specific response rate for the 2009 survey. Thus, the counts of physicians are *estimates* of the actual number of physicians in each county and not the number of respondents in each county.

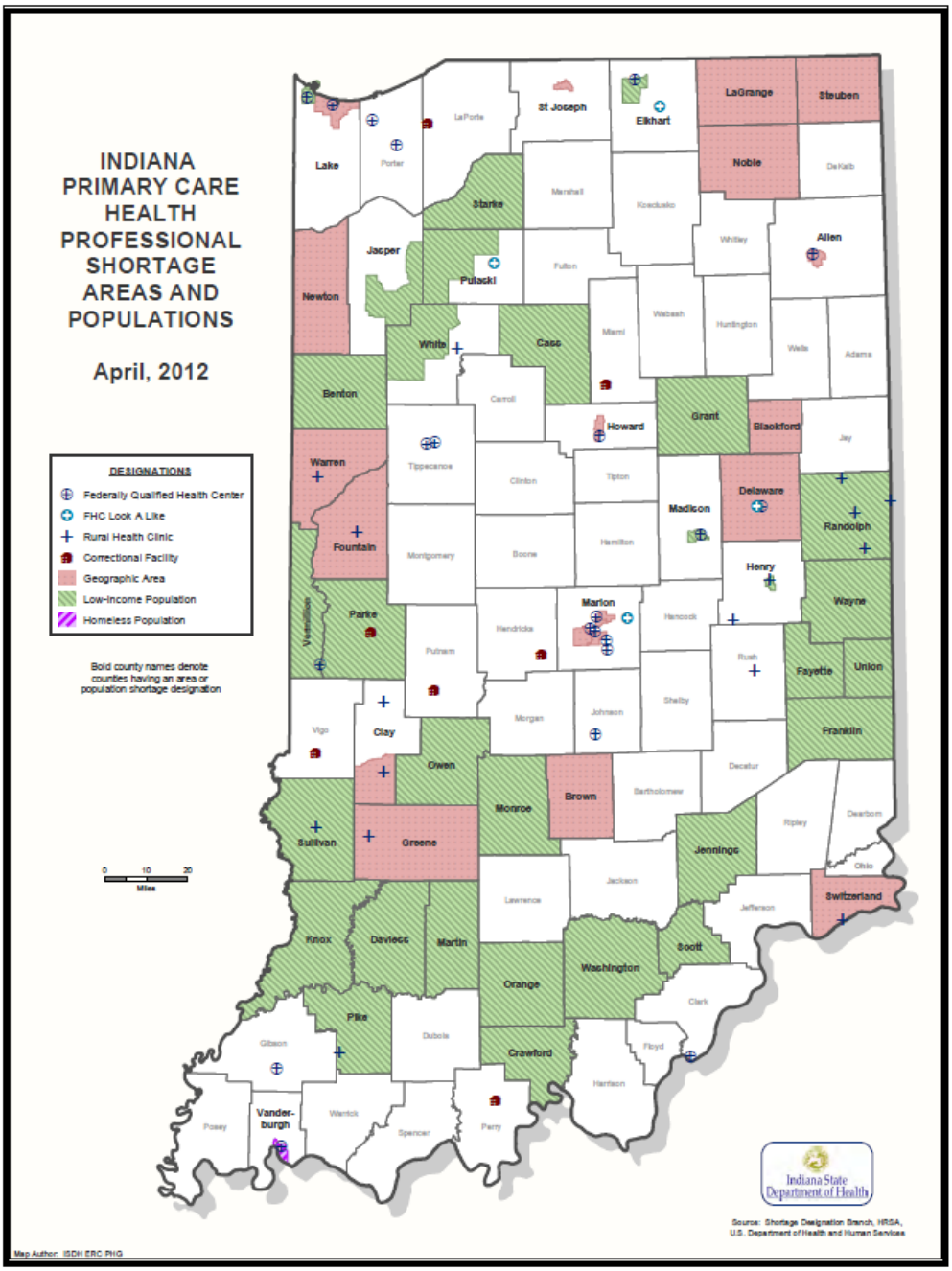
Figure 39. Estimated Distribution of Indiana Physicians Based upon 2009 Survey Data Projections.



Source: 2009 Indiana Physician Re-licensure Survey Report. Zollinger, Kochhar, Coffing, Canada (2010).

Essentially, these areas correspond to the designated professional shortage areas highlighted in **Figure 40** below. In addition, information supplied through the Indiana Hospital Association indicated sixteen counties within Indiana that have no acute care hospital and eleven counties without obstetrical services, demonstrating keen shortages of even basic clinical services in those rural counties.

Figure 40. Indiana Primary Care Health Professional Shortage Areas and Populations.



The following table compares Indiana's projected physician demand and supply by specialty in 2010. Baseline population data was supplied by the US Census 2005. 2020 demand projections supplied through **Current Perspectives on Physician Supply and Demand** (Lifton, 2007).

Figure 41. Comparison of Indiana's Projected Physician Demand and Supply by Specialty.

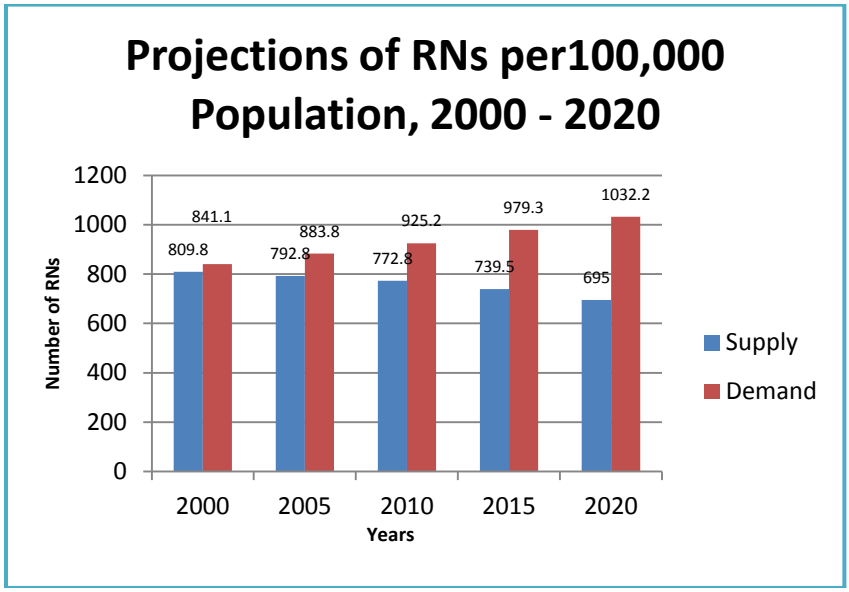
Specialty	Projected Total Number in State	IN Physician Supply per 100,000	2020 Physician Demand per 100,000	Difference Between Supply and Demand	Number of Physicians Needed
Family Medicine	2560	38.6	53.9	15.3	1030
General Internal Medicine	1691	25.5	31.2	5.7	383
General Pediatrics	1011	15.3	13.5	-1.8	-118
General OB/GYN	769	11.6	14.3	2.7	182
General Surgery	355	5.4	11.6	6.2	421
Total	6386				1898

Sources: US Department of Health and Human Services Health Resources and Services Administration Area Resource File http://www.arfsys.com/ ; US Census Bureau; Lifton, J. (2007). *Current Perspectives on Physician Supply and Demand*. Park Ridge, IL: Lifton Associates.

Projected shortages are not limited to physicians. According to an Indiana University Center for Health Policy Report (Zollinger, Holloway, Allen, Przybylski, 2008) if current trends continue, by 2020, Indiana will be short an estimated 20,000 registered nurses. More specifically, 65% of urban counties and 87% of rural counties in Indiana fail to meet the US benchmark for an adequate ration of RNs per 100,000 population. Figure 42 displays the gap between existing and projected need for registered nurses in Indiana. The numbers on the graph are ratios of nurses per 100,000 population. Based on these numbers and the projected number of Indiana residents, the shortage of RNs in 2005 was 5,660, very near the number of open nursing positions in Indiana hospitals (5,784) reported by the Indiana Hospital and Health Association for the first quarter of 2007. With current trends, the estimated shortage of RNs in Indiana by 2020 will be 22,076.

The following graph demonstrates the widening gap between nurse supply and demand projected over a twenty year period in Indiana.

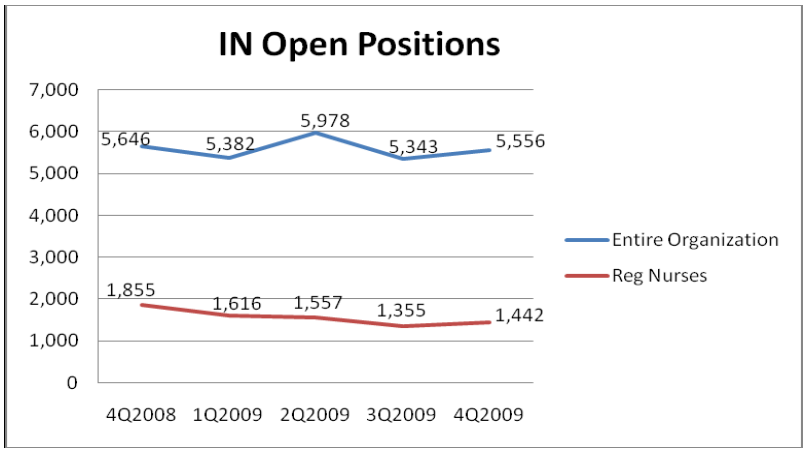
Figure 42. Nursing Workforce Projection.



Source: The National Center for Health Workforce Analysis.

According to the Indiana Hospital Association (IHA) Benchmarking Survey (2009, 4th quarter), 2009 ended with a rise in total open healthcare positions in Indiana. Registered nurses comprised the largest number of open positions with 1,442 openings. Still lower than in the same quarter of 2008, the number of open RN positions in fourth quarter 2009 was 6% higher than it was in the previous quarter. Imaging, Pharmacists, Occupational Therapist and Lab open positions saw a significant boost in fourth quarter 2009 while Respiratory Therapist open positions stayed relatively the same. Physical Therapist was the sole position that experienced a decrease in the fourth quarter of 2009. The graph below shows the change in open positions according to the Indiana Hospital Survey.

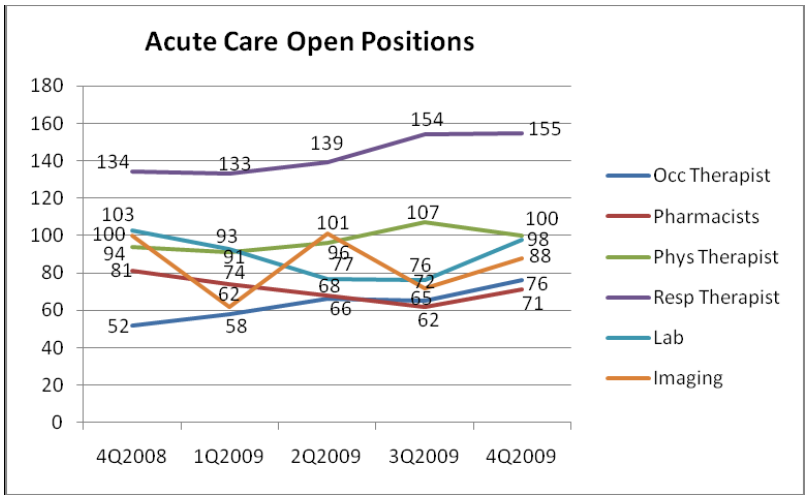
Figure 43. Open Positions, All Hospitals, 2009.



Source: Indiana Hospital Association Benchmarking Survey Report, 2009

The following graph examines all open positions among reporting hospitals in the IHA survey (4th quarter, 2009).

Figure 44. Acute Care Open Positions, All Hospitals, 2009.



Source: Indiana Hospital Association Benchmarking Survey Report, 2009

The Behavioral and Mental Health Professionals Re-Licensing Report for 2004 & 2006 (2010) indicated that based upon surveys received, counties with the largest populations tended to have the most mental health professionals and the highest ratios per 100,000 population. All Indiana counties had at least one mental health professional. Seven counties lacked even one social worker. Forty-six counties (50.0%) did not have a marriage and family therapist who responded to the survey. Thirteen counties (14.1%) did not have a mental health counselor who responded to the survey. Twenty counties (21.7%) did not have other mental health professionals who responded to the survey.

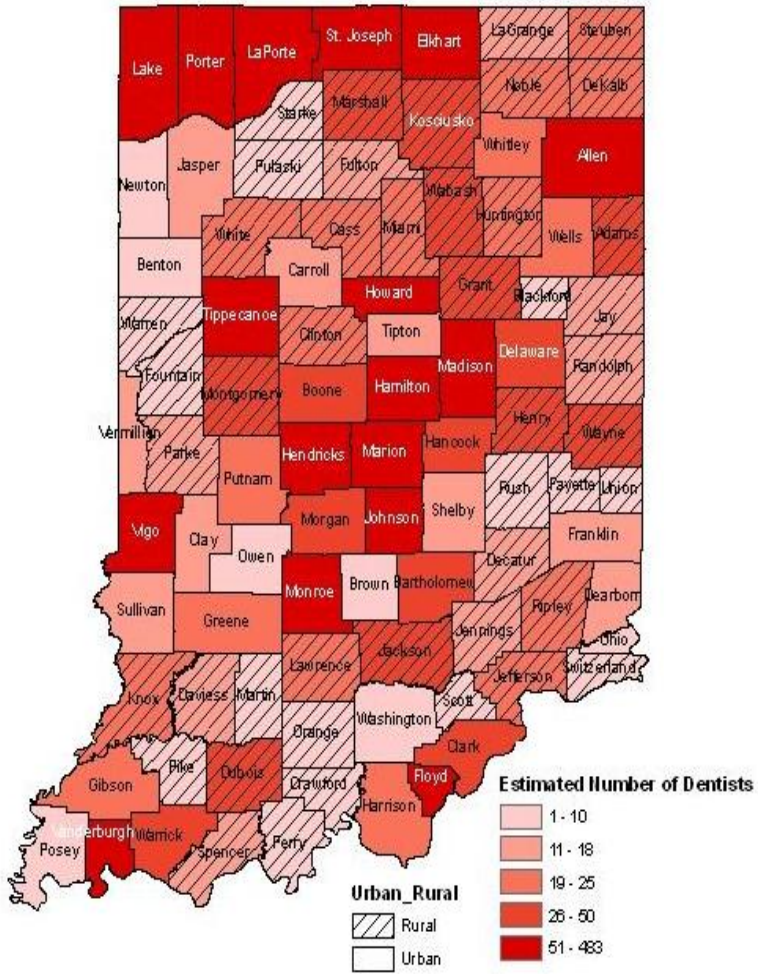
The number of mental health professionals licensed in Indiana has slightly decreased from 2004 to 2006. Most mental health professionals were white, non-Hispanic, female, and in the 45-54 age group. Most of their professional time was spent in social work activities followed by mental health counseling activities. The top three practice areas were general mental health, mood disorders, and anxiety disorders. Over four-fifths of the psychiatric and mental health nurse respondents were actively working as psychiatric mental health nurses in Indiana. Almost all were female, white, and non-Hispanic/Latino. Over two-thirds provided patient care as a registered nurse. Their major activities included psychopharmacological interventions and clinical supervision/education. Less than three-fifths anticipated retiring in ten or more years. There is a need to train, recruit and retain more mental health professionals actively working in Indiana.

The number of some specific types of professionals appeared to have declined in 2006 compared to 2004. In addition, many mental health professionals are reaching the retirement age, especially marriage and family therapists. Also, the data clearly shows a gender and minority gap in the workforce, which could have an impact on the patient population who seek help from mental health professionals.

The 2010 Indiana Dentist Re-licensure Survey was administered by the Indiana Professional Licensing Agency under a contract with the Indiana State Department of Health. The report summarizing responses to the survey indicated that 40 percent of the respondents were at or near retirement age (55 or older), while only 14 percent were younger than 35 years of age. This pattern indicates a potential shortage of dentists in Indiana in the next 10 to 15 years. There were three times as many males as there were females; however, almost 45 percent of those under the age of 35 were female, while males made up the majority of those at or near retirement age. This pattern indicates a shift in gender composition within the Indiana dentist workforce. Almost 15 percent of the respondents reported working less than 30 hours per week performing direct patient care activities. Females accounted for almost 40 percent of respondents who reported working less than 30 hours per week.

The following map estimates the number of dentists per Indiana County. It is clear that rural counties offer fewer dental services to their residents.

Figure 45. Estimated Number of Dentists by County, 2010.



Source: 2010 Indiana Dentist Re-Licensure Survey Report, Indiana Center for Health Workforce Studies, 2011.

Health Professional Summary

Indiana's health care workforce is lacking in rural areas. Recruitment and retention are essential activities for most providers. Not only does Indiana need sufficient coverage of medical providers from many disciplines who are able and willing to work with citizens from rural counties, but those providers must be highly skilled and comfortable with the lifestyle that rural communities provide.

Efforts to provide rural rotation experiences are underway. Indiana's Area Health Education Centers are actively working across the state to develop an interest and vision among Indiana's young people to promote the pursuit of health-related careers and eventual practice in Indiana's underserved areas. Further, they actively recruit candidates for training that match the demographic characteristics and culture of persons in underserved communities. Supporting health care workforce development activities and connecting existing efforts with providers seeking health care workers is essential. Creating connections between needed specialists and needy communities are key efforts in developing Indiana's health care workforce.

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Section IV. Flex Funding

The Medicare Rural Hospital Flexibility (Flex) Program was established by the Balanced Budget Act of 1997. The purpose of the program is to help rural communities preserve access to primary and emergency health care services by:

- Enhancing emergency medical services;
- Improving health care quality and performance; and
- Promoting rural health networks and community development

Flex grants help rural health care providers and rural communities respond in a comprehensive, collaborative, and more effective fashion to major changes affecting the rural health system and rural communities. Local and regional partners are encouraged to work together to assess their environments and community needs and to plan and implement strategic responses to improve rural health care delivery. Grants are available for activities ranging from planning through implementation, with an emphasis on activities leading to measurable outcomes.

Flex Program Work Plan

The Flex Program Work Plan provides a detailed description of the Indiana Flex Program for year one, including program/project overview, needs assessment, proposed activities, and measures (outcome and process). The goals, objectives, strategies, activities (inputs), staffing needs, responsibilities, outcome measures (outputs) both qualitative and quantitative, timeframes for program/project start and completion, and overall outcomes are outlined in the tables and narrative provided. As required, the Work Plan outlines in detail each activity's relationship with one or more of the four core areas of the Flex Program.

- Flex Core Area 1 – CAH Support for Quality Improvement
- Flex Core Area 2 – CAH Support for Financial and Operational Improvement
- Flex Core Area 3 – CAH Support for Health System Development and Community Engagement
- Flex Core Area 4 – Facilitate CAH Conversion of Small Rural Hospitals to CAH Status

A proposed five-year plan with Program timeframes for each anticipated Program activity is documented.

Work Plan Goals and Objectives

The goals and objectives of the Program have been designed around the Flex core areas for the Rural Hospital Flexibility Program 2010- 2015 and were adopted by the Flex Committee in an attempt to meet the needs of rural health care providers and ultimately those of rural residents in Indiana.

Program Goal 1:

Core Area 1: Provide CAH Support for Quality Improvement (QI)

- Develop a statewide data reporting and sharing system via a secure portal for data exchange.
- Support CAHs in building upon a multi-hospital quality improvement project involving

hospital readmissions targeting chronic diseases to increase patient safety and quality of care.
- Increase access to care for specialty and subspecialty services through telehealth initiatives.

Program Goal 2:

Core Area 2: Provide CAH Support for Operational and Financial Improvement

- Support CAHs with planning and implementing evidence-based strategies for improving financial performance.

Program Goal 3:

Core Area 3: Provide CAH Support for Health System Development and Community Engagement

- Develop and expand use of electronic tools and e-learning to enhance communication, training and education, and interaction among CAHs in Indiana to increase access to health care services by residents in Indiana.

Program Goal 4:

Core Area 4: Facilitate Conversion of Small Rural Hospitals to CAH status

- Facilitate conversion of small rural hospitals to CAH status in accordance with federal and state regulation as needs arise among Indiana rural hospital providers.

Assumptions in Work Plan Goal Development

The goals of the Indiana Flex Program were developed with the assumption that the initiatives and projects will benefit rural CAH providers throughout the state of Indiana. Specifically, it is assumed that by implementing the initiatives and projects, participating rural CAH providers would have access to resources, services, and programs that they otherwise would not have. Examples of outcomes expected once these resources, services, and programs are applied include:

- Improved operational efficiency of rural CAH providers
- Improved connectivity of rural CAH providers and communities
- Increased utilization of Health Information Technology and videoconferencing capabilities
- Provision of education programs developed specifically to meet the needs of rural CAH providers and communities
- Increased ability to meet Information Technology needs of rural CAH providers through group purchasing and service agreements
- Development of self-sustaining programs that add value to rural CAH providers and organizations

It is assumed that an infusion of resources, services, and programs will enhance the quality of provided services, thereby making rural CAH providers more competitive and their services more attractive to local patients. Although these assumptions were made, the SORH based programming and direction with the aid of practitioners. It has also been assumed that, by receiving funds through the HRSA Flex Program Grant, rural Indiana CAH providers will be able to enhance the overall clinical and financial performance of their hospitals, thereby creating a positive impact upon the rural communities they serve.

Figure 46. Projected Impact of the Indiana Flex Program, 2010-2015.

	Flex Core Area 1	***Flex Core Area 2***	***Flex Core Area 3***
I.	**Statewide CAH Benchmarking Program** Clinical data and outcomes	**Statewide CAH Benchmarking Program** Financial data and operational outcomes	**Statewide CAH Benchmarking Program** Educational training and support
II.	**Statewide CAH Quality Program** Project #1 CAH Readmissions Clinical data and outcomes	**Statewide CAH Quality Program** Project #1 CAH Readmissions Financial data and operational outcomes	**Statewide CAH Quality Program** Project #1 CAH Readmissions Educational training
	Statewide CAH Quality Program Project #2 TeleStroke Network Telemedicine Network Clinical data and outcomes	**Statewide CAH Quality Program** Project #2 TeleStroke Network Telemedicine Network Financial data and operational outcomes	**Statewide CAH Quality Program** Project #2 TeleStroke Network Telemedicine Network Educational training
III.	**CAH Educational Programs** Quality (clinical) Leadership	**CAH Educational Programs** Quality (financial) Leadership/BOD HIT	**CAH Educational Programs** HIT
IV.	**Videoconferencing & E-learning Program** Years 2 – 5 Phase 2 E-learning/virtual education	**Videoconferencing & E-learning Program** Years 2 – 5 Phase 2 E-learning/virtual education	**Videoconferencing & E-learning Program** Years 1 – 5 Phase 1 Videoconferencing/virtual meetings
V.	***Flex Core Area 4 - Facilitate Conversion of Small Indiana Rural Hospitals to CAH Status (2011 – 2015)*** to facilitate appropriate conversion of small rural hospitals to CAH status in accordance with federal and state regulation. SORH will provide resources as needs arise. Currently, no CAH conversions are anticipated.		

Current Flex Projects

CAH Readmission Project

The objective of supporting CAHs in implementing a quality/patient safety project focused on reducing avoidable readmissions through improvements in discharge processes. Site visits were conducted with each of seven participating hospitals to review CHF/PM readmission rates and strengths and weaknesses of current discharge processes. Project activities center on shift-to-shift communication, patient reconciliation tools, timely sharing of patient discharge information patient education/health literacy, collaborative partnerships among providers, and the use of personal health records. Technical assistance is being provided to assist CAHs with change implementation. Utilization, length of stay, and financial data are being collected as indicators of change.

Benchmarking/State Portal Project

The Indiana Flex benchmarking initiatives will be tracked through the *Medicare Beneficiary Quality Improvement Project*. The State Office of Rural Health will begin using the *Center Activity Tracking System* (CATS) for reporting performance improvement measures to HRSA as well as tracking at least 10 additional statewide measures focused on current Flex projects. The

SORH will continue to look into options and needs for statewide reporting into a statewide portal. Additionally CAHs will be trained on the submission of data to *Hospital Compare*.

Medicare Beneficiary Quality Improvement Project (MBQIP)
Baseline data was established for this project with support from Health Care Excel, the Indiana QIO. The goal of this project is to increase participation in Hospital Compare to improve publicly available data and to motivate CAHs to implement related quality improvement initiatives.

Telehealth Network Project
This project supports the continued development of the Indiana Statewide Rural Health Network (InSRHN) TeleStroke Network Project and its objectives: (1) to deliver specialty services statewide through telehealth focusing on stroke, and (2) to implement evidence-based practice guidelines for stroke care by partnering with the American Heart Association and the Indiana QIO to implement the *Get with the Guidelines* for stroke care. This model can be expanded in terms of membership and/or adapted for other medical conditions.

CAH Educational Programs Project
Funding for this initiative supports major educational events, a newsletter, technical assistance, and evaluation activities throughout the year aimed at hospital quality improvement and/or operational and financial improvement.

Videoconferencing and E-Learning Project
The objective of this project is to create a statewide rural videoconferencing platform for CAHs to use for meeting, training, and educational opportunities. The first phase of this project, establishing the videoconferencing bridge has been accomplished through the purchase of a 12-port Tandberg Codian bridge and the connection of six pilot CAH locations to that bridge. Next, equipment for the continued development of the network must be obtained and installed. Then group purchasing of existing online courses will occur. Partnerships with the Indiana University Department of Public Health will allow access to a learning management system for continuing education records management.

CAH Conversion
No conversions are in process at this time.

Hospitals to be served through Flex funding

Through the selected programs and projects, all thirty-five CAHs will benefit. Over the five year Flex grant period, initiatives will be phased in using a sequence that serves the priorities of the Flex constituencies and results in meaningful absorption and change.

The Indiana **Rural Health Plan/Flex Grant Logic Model** included below shows the connections between program inputs, outputs and outcomes expected as a result of the efficient use of Flex funds as proposed.

Figure 47. Flex Logic Model.

Rural Health Plan Themes	Flex Grant Core Areas	Baseline	Inputs	Outputs	Outcomes
1. Support Collaborative solutions to issues of rural health services quality and access. 2. Provide equitable and accountable funding strategies for appropriate projects resulting in improved care and/or provider accountability for rural citizens. 3. Utilize existing expertise already working on rural health issues to greatest degree possible. 4. Aid in accountability of clinical practice and financial acumen of rural providers. 5. Act as conduit of accurate information to and from Critical Access Hospitals, rural providers, training experts, and state policy makers.	1.Support for Quality Improvement 2. Support for Operational and Financial Improvement 3. Support for Health System Development and Community Engagement 4. Facilitate Conversion of Small Rural Hospitals to CAH status	Current State Extent of the Problem Need for change	a. Data Gathering b. Reporting c. Increased Measurement d. Protocol Development e. Research f. Materials/product development g. Equipment/ Technology or other Training h. Implementation of EBP i. Assessment of need j. Collaborative Agreements	a. Increased reporting b. Change as result of training c. Increased data available d. Greater utilization of HIT/EHR e. Increased collaboration with other CAHs f. Increased efficiency g. Increased revenue h. Increased access i. Infection control j. Reduced chronic admissions	a. Increased knowledge b. Improved health of constituents c. Increased internal efficiency d. Improved networking e. Increased transparency f. Increased resources g. Increased capacity h. Habit change i. Social change
		Baseline Measures	**Input Measures**	**Output Measures**	**Outcome Measures**
		Waiting List Wait Times Repeat Admissions Accidents Culture Surveys Follow up Services Health Record Issues Documentation Issues Communication Issues	Level of participation Amount and type of assistance Activities to promote positive change Training activities and level of participation Connectivity ratings	Extent of the change against baseline	Impact of change on defined issue Dissemination of improved processes

Full-time Flex Program Coordinator
In order to successfully implement the Flex-funded CAH activities, the SORH has hired a full-time Flex Coordinator, Cindy Large, who will be responsible for overseeing implementation of the Flex strategies and activities prescribed in the work plan within the identified time period.

Flex Advisory Committee
The SORH has convened a Flex Advisory Committee comprised of a diverse group of CAH leaders, rural health care experts, key stakeholders, and others. The mission of the Flex Advisory Committee is to support efforts to improve and sustain the quality of care provided by CAHs to ensure that Indiana rural citizens receive appropriate care in their communities. The SORH and Flex Coordinator will draw upon the expertise and experience of the Flex Advisory Committee and CAH leaders to identify the needs and challenges of Indiana's rural CAH providers and the communities they serve, develop methods for addressing these needs and challenges, and implement additional activities as identified that will benefit the overall needs of the Indiana CAHs.

Figure 48. Flex Advisory Committee, 2011-2012.

Committee Member Name	***Organization***
1. Ann Alley	Indiana State Office of Rural Health Flex Advisory Committee Chairperson
2. Brad Dykes	Bedford Regional Medical Center
3. Brad Smith	Rush Memorial Hospital Indiana Hospital Association Council on Rural
4. Becky Sanders	Indiana Rural Health Association
5. Cindy Large	Indiana Rural Health Association
6. Deb Rasper	St. Vincent Mercy
7. Dennis Weatherford	Putnam County Hospital
8. Don Kelso	Indiana Rural Health Association
9. Jim Miller	Indiana Rural Health Association
10. Deena Dodd	Indiana Rural Health Association
11. Emmett Schuster	Gibson General Hospital
12. Gregg Malott	Pulaski Memorial Hospital
13. Stephanie Laws	Richard G. Lugar Center for Rural Health
14. Stephanie Long	White County Memorial Hospital
15. Brittany Knick	State Office of Rural Health
16. Andrea Koontz	Community Hospital of Bremen
17. Rebecca Royer	Health Care Excel and Consulting, Inc.
18. Tim Putnam	Margaret Mary Community Hospital
19. Linda Simmons	Decatur County Memorial Hospital
20. Kathy Lewis	IU Health Bedford Hospital
21. Amy Brandt	IUPUI
22. Deb Leinker	Parkview LaGrange Hospital
23. Elizabeth Burrows	Clinton/Parke Vermillion FQHC/Union Hosp.
24. Lori Phillips	Gibson General Hospital
25. Marina Wolfe	Union Hospital Clinton
26. Matt Serricchio	IRHA

Most Flex Committee members volunteered while others were referred by the community. Members

are experts in rural Indiana health care representing Indiana CAHs, the SORH, associations and other rural-serving entities. The Committee's input and direction will be accommodated by the Flex Coordinator and the SORH through meetings, minutes, and written recommendations. The Flex Advisory Committee is charged with helping to update the Indiana Rural Health Plan and advising the Flex grant application at least annually. This 26-member committee has a diversified rural background, predominantly representing the Indiana CAHs, and will serve as a support and resource for the Flex Program.

The Indiana Flex Advisory Committee meets a minimum of three times a year via face-to-face meetings or conference calls, to be facilitated by the SORH/Flex Coordinator who will be responsible for insuring implementation of statewide Flex program and initiatives. During these meetings, Flex Program goals, strategies, and activities will be discussed, and the SORH/Flex Coordinator will provide direction to the committee members regarding tasks that must be accomplished in order to successfully complete the initiatives/activities described in this grant application. In addition, concerns and obstacles will be identified and strategies will be developed to address and overcome these issues.

Expected Benefits from Flex Program Activities

Increase in Access to Quality Health Care Services

It is anticipated that rural communities and residents will experience increased quality of care services and more stable access to rural health care services as a result of Flex Program initiatives. This will occur through combined efforts across diverse issues, resulting in economies of scale, resource sharing, and shared programs. A few of the potential health care system improvements that may occur as a result of network activities include:

- Implementation of quality improvement initiatives
- Implementation of best practices and evidence-based practice guideline for chronic disease management
- Reduction in readmission rates
- Access to needed specialty and subspecialty services in their communities
- Health Information Technology (HIT) resources, collaborative purchasing, and utilization
- Education and training for CAH leadership, management, and health care professional staff
- Education accessibility for rural communities and residents

In addition, the activities of the Flex Program will enable rural health providers to leverage the resources needed to create economies of scale, improve access to health care services, and ultimately improve the health and well-being of Indiana's rural residents.

While the ***design*** of the Indiana Flex Program will positively impact rural health providers, it is anticipated that urban and suburban health care providers may lose patients as a result of improvements in the rural health care delivery system. However, it is believed that shifts in health care utilization will be small in comparison to the overall business of a large hospital or clinic. Conversely, these same changes in health care utilization will result in a substantial positive impact for rural health care providers.

It is clear that those CAHs participating in and benefiting from the Flex Program initiatives are able to obtain advantages that otherwise would be unavailable. These advantages include:

- Strengthened collaborative efforts among rural health providers in Indiana
- Access to resources to strengthen rural health care delivery resulting in higher expectations regarding performance improvement initiatives among CAHs
- Structured environment for statewide networking opportunities for CAHs that would otherwise be impossible
- Improved employee and physician satisfaction scores

As a result of the Flex Program initiatives, it is anticipated that Indiana's rural CAH providers will establish a more efficient and cost-effective rural health care system that will ensure their sustainability. Accordingly, if these rural health care providers are cost-effective, they will remain viable locations for the provision of high quality health care services for years to come; ultimately improving the quality of life for Indiana's rural residents.

The Flex program will strengthen the ability of Indiana's rural health providers to serve their respective rural communities by providing needed services, products, and programs that they would otherwise not be able to access due to financial and staffing limitations. Examples of potential services, products, and programs that could be purchased and/or implemented through efforts of the Flex Program include:

- Mandatory annual training/education via electronic communication methods
- Increased ability to attend meetings and/or educational programs via electronic modalities
- Participation in rural health quality programs focusing on disease processes identified as a statewide improvement area
- Access to specialists and subspecialists, while keeping patients in their own communities
- Development of collaborative agreements that enable the provision of virtual training, meetings, and webinars.
- Reallocation of time formerly spent in travel to meetings toward patient and management-centered activities
- Collaborative agreements among network members to develop joint training programs and performance improvement measures

In addition, by convening the Flex Program user groups, each participating CAH organization will have the opportunity to draw upon the expertise of the other CAHs or organizations. Lastly, the Flex Program initiatives develop and nurture affiliations with other rural providers, state associations, and universities, creating opportunities for CAHs individually and collectively to expand the types and quality of services they provide. Appendix B contains the evaluation report of Flex Program Activities for the 2010-2011 program year.

Resources and Capabilities

Collaborations
Key stakeholders include both rural health care providers and organizations that serve CAHs

throughout the state of Indiana. These key stakeholders bring statewide and national resources to support successful outcomes of Indiana's Flex Program. The collaborative seeks to:

- Provide support, resources, technical assistance, and expertise necessary for successful program implementation
- Provide knowledge regarding the needs and challenges faced by rural health care providers in Indiana as they pertain to quality improvement activities and the skills to address these needs and challenges
- Participate in Flex Program meetings and/or conference calls as needed
- Provide meeting space for meetings, as deemed appropriate
- Dedicate staff time to assist with successful implementation of Flex Program activities

Below is a listing of stakeholders that have committed to Indiana's Flex Program activities with a description of the organization, the skills, knowledge, and expertise they bring, and the ways in which they add value to the Flex Program.

Indiana Rural Health Association (IRHA): IRHA was founded in 1997 as a not-for-profit corporation for the purpose of improving the health of all rural citizens in Indiana. The mission of IRHA is to enhance the health and well-being of rural populations in Indiana through leadership, education, advocacy, collaboration, and resource development. In keeping with the organization's mission, IRHA has historically implemented projects and programs that are beneficial to rural health care providers and the patients that they serve. Given the previously established relationships and prior collaborative history with CAHs and other statewide rural health organizations in Indiana, IRHA is well positioned to support the SORH and the Flex activities proposed within this application, as well as to meet and exceed Program requirements and expectations. IRHA is supportive of the Indiana Flex Program and has provided a letter of support regarding the proposed Flex initiatives.

Indiana Hospital Association (IHA): A state and regional organization representing 166 Hoosier hospitals and health systems, IHA works to provide leadership, representation, and services in the common best interests of its members as they promote the improvement of community health status. IHA is supportive of the Indiana Flex Program and has provided a letter of support regarding the proposed Flex initiatives.

Health Care Excel, Indiana Quality Improvement Organization (QIO): Health Care Excel (HCE) is recognized as one of the most experienced health care utilization management and quality improvement organizations in the United States. Given Health Care Excel's expertise regarding health care quality improvement activities, the organization's extensive collaborations with SORH and Indiana CAHs, as well as their commitment to the Flex Program activities, it is anticipated that the organization will prove a formidable partner that will help ensure successful quality improvement activity implementation. HCE is supportive of the Indiana Flex Program and has provided a letter of support regarding the proposed Flex initiatives.

Critical Access Hospitals (CAHs): There are 35 CAHs in the state of Indiana. These small rural hospitals that have 25 beds or less and are located in rural areas of the state of Indiana provide

access to needed services for rural residents. The participation of these hospitals in the Flex Program will provide needed combined services that will benefit Indiana's rural communities. The responsibilities of the CAHs participating in the Flex Program are:

- Participation in program meetings and/or conference calls as requested
- Dedicate staff time to assist with successful implementation of program activities
- Provide a portion of staff time as an in-kind contribution(s) to help ensure successful implementation of Program activities

Informing Future Efforts

The Flex Advisory Committee determined that it would be beneficial to repeat the initial Critical Access Hospital survey distributed in years 2009 and 2010 to begin to collect longitudinal data on CAH issues and performance. The information gathered served several purposes. First, the hospitals collectively establish an overall picture of the impact of the economy on human resources, funding, and services within their areas. Next, the survey identified areas of greatest concern, issues of vulnerable populations, current benchmarking and statistical reporting mechanisms, level of telehealth involvement, and training needs. In addition, the survey identified primary unmet community healthcare needs and requested input regarding the ways that Flex program might be able to respond to those unmet needs. The full survey instrument is included in Appendix A.

Critical Access Hospital Survey Outcomes –2012

The following section summarizes the results of Indiana State Department of Health Survey of Critical Access Hospitals. The survey (See Appendix A) was an essential component in the development of an equitable and accountable process for determining the priorities for Flex funding for the year. Input provided by the CEOs of the Critical Access Hospitals established an up-to-date snapshot of emerging health needs in our state in response to demographic, administrative, and economic shifts, as well as defined categories of need for Flex funds.

Responses

The survey was distributed electronically to CEOs of all thirty-five of Indiana's critical access hospitals. The survey was divided into three sections with an electronic link to each section in order to allow for internal forwarding to subject matter experts in Human Resources, Administration, and Finance. It was therefore the responsibility for each hospital to complete three separate surveys. Not all hospitals completed all surveys. The completion rate for the Administration survey was 49% (17 of 35 reporting); the rate for the Finance surveys was 29% 10 of 35 reporting); and the rate for Human Resources was 40% (14 of 35 reporting). Responses are summarized in the aggregate in the following paragraphs around themes of workforce, effects of the external economy, data management and technology, training needs, interaction with local health departments, and unmet community health care needs.

Issues of Greatest Concern

The CEOs of the participating Critical Access Hospitals identified issues of greatest concern from their administrative perspective. The issue of greatest concern for the majority of respondents was Reimbursement. Health Care Reform, Recruitment and Retention of Physicians, and Financial Performance were all tied as the second major concern. Thus, the areas of greatest concern for Critical Access Hospital CEOs at this time fall into two primary categories: Workforce and Financial.

Workforce Issues

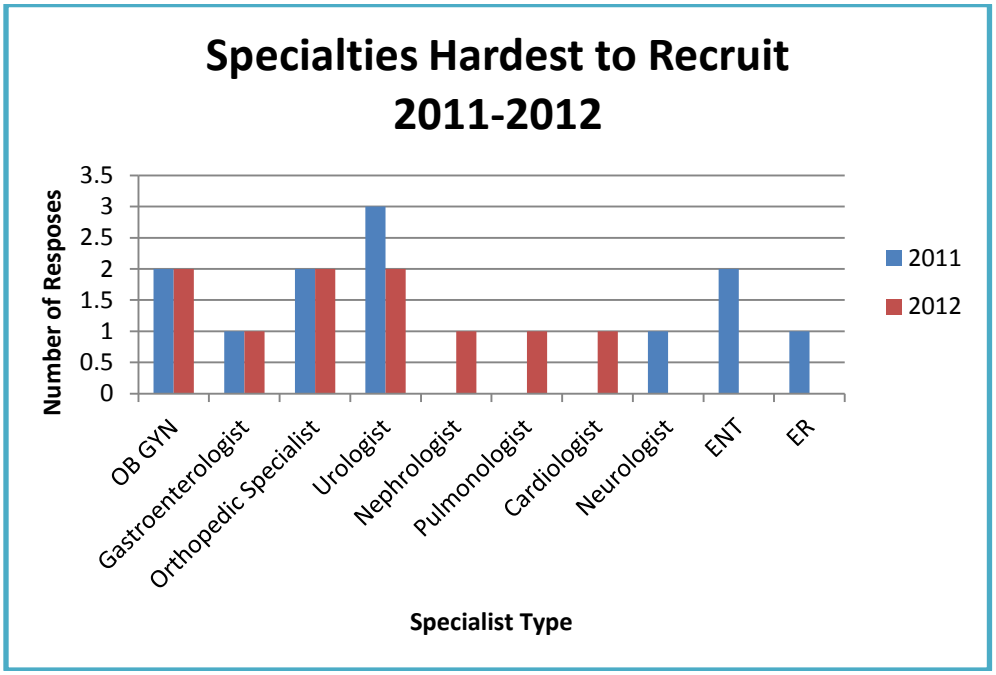
The critical access hospitals are experiencing from zero to twelve full-time positions open at each critical access hospital on a weekly basis; a range of from zero to thirteen part-time positions are typically available. It was indicated that it could take months to fill open positions. The positions hardest to recruit are primary care physicians, nurses, pharmacists, and specialty care physicians. See **Figure 49** below that compares the recruitment difficulty of four positions over time. In 2011, the ability to fill pharmacy positions was indicated as difficult by 50% of survey respondents. In 2012, for those responding, pharmacy recruitment was less of an issue.

Figure 49. Positions Most Difficult to Recruit, 2009 to 2012.

Position	Yes – Difficult to Recruit in 2009	Yes – Difficult to Recruit in 2010	Yes – Difficult to Recruit in 2011	Yes – Difficult to Recruit in 2012
Nurses	44%	32%	38%	43%
Primary Care Physicians	76%	54%	62%	79%
Adv. Practice Nurses	96%	10%	25%	1%
Specialty Care Physicians	68%	42%	38%	29%
Pharmacists			50%	21%

Of the specialty care physician positions, the ones most difficult to fill are summarized in the chart below.

Figure 50. Specialties Most Difficult to Recruit, 2011 and 2012.



The chart above may not represent the same respondents over both years. In the intervening period, some critical access hospitals have aligned with larger hospital networks, thus potentially reducing the need for independent recruitment and shifting the availability of specialists.

Some hospitals have had to resort to reductions in force as a response to economic downturn. In 2010, six hospitals reported reductions of an average of 24 persons, slightly higher than the reported 20 persons in 2009. In 2011, two respondents acknowledged reductions in force averaging 20 individuals each. In 2012, one respondent indicated a reduction of two positions. Based upon those responding, it appears that reductions may be leveling off for the time being.

Effects of External Economy

Plant closings, downsizings, and/or business failures have had staggering impacts on Indiana's rural communities. Twenty percent (20%) of survey respondents indicated that within the last year, downsizings have continued with both manufacturing and small business losses. Hospitals are also noticing reductions in health coverage and higher deductibles in response to budget cuts among existing employers. In many cases, employees with chronic conditions cannot pay the annual deductibles that often reach the $5,000 per year range. In many cases, the economy in these rural areas is not rebounding; the impact of recession continues. In addition, two hospitals reported that they are taking on immunization responsibilities in their communities due to public health department budget cuts. Decreased reimbursement for some hospitals has resulted in the discontinuation of some services such as obstetrics and home health services, with more reductions anticipated.

By averaging payer mix responses from all hospitals reporting, an aggregate picture of current-state payer mix was developed and graphed in Figure 51. According to 2012 survey respondents, Medicaid accounted for a range of between 12 and 60% of patient receivables; Medicare accounted for a range of 10-50% of patient receivables; Commercial insurance created from 10 to 41% of patient receivables; Uninsured/Self payers ranged from 7 to 13%; and Charity accounted for between .2 and 10% of hospital patient billings. It is clear that the CAHs represent varying levels of payer complexities depending upon local economy and demographic mix. In addition, not all hospitals track payer information in these categories.

Figure 51. Average Payer Mix of Critical Access Hospitals, 2012.

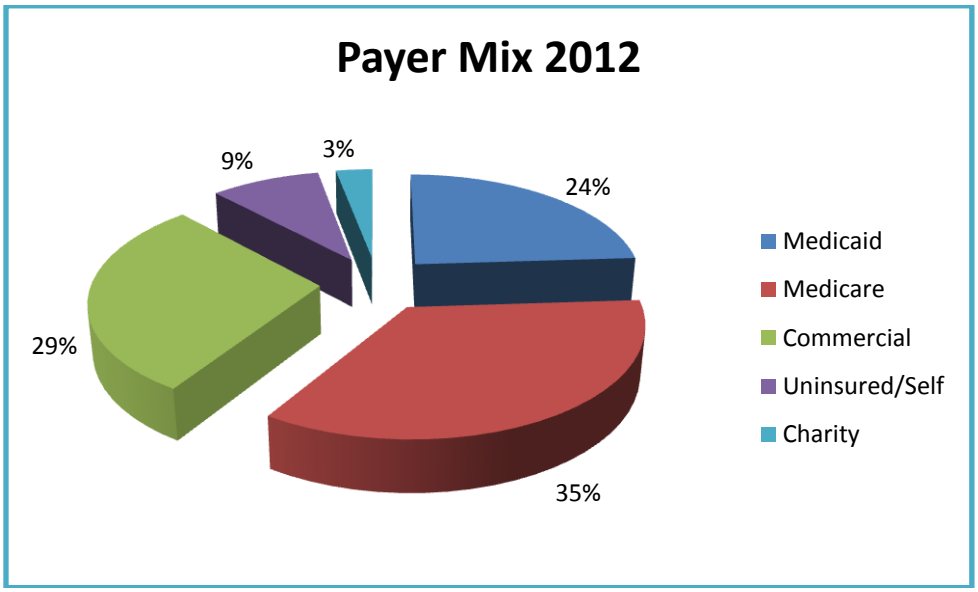


Figure 52. Comparison of Payer Mix 2009 through 2012.

Payer	2009 Survey Data	2010 Survey Data	2011 Survey Data	2012 Survey Data
Medicaid	14%	12%	16.4% (20/35)	24% (12/35)
Medicare	44%	41%	39.8% (16/35)	35% (11/35)
Commercial	32%	28%	32.7% (15/35)	29% (10/35)
Uninsured/Self	7%	12%	8.1% (13/35)	9% (10/35)
Charity	3%	3%	3.4% (10/35)	3% (9/35)

It appears that Medicaid is a growing revenue source, as is commercial insurance. However, these statistics may not represent the group as a whole. Please note the number of responses included in the averages viewed in parentheses.

Concern for vulnerable populations and ways to best serve them also was in evidence. The CEOs collectively supplied the following unduplicated list of vulnerable populations that are present in their areas. This is not a ranked list. The diversity in the identified populations underlines the

variety of needs in CAH communities.

- Latino Community
- Growing Medicaid populations
- Families with very limited resources/working poor
- Amish population
- Elderly
- Persons with multiple chronic diseases
- Uninsured
- Underinsured
- Persons with Behavioral Health Needs
- Children
- Non-English Speaking Populations
- Corrections Prisoners
- Diabetic Population
- Disabled population

Meeting the needs of these vulnerable populations requires high levels of resource utilization as well as specialized support systems. The following comments are paraphrased qualitative responses from CAH CEOs regarding the impact that serving the vulnerable populations has on the hospital's resources. The comments are not rank-ordered and may represent issues cited by more than one hospital.

Self-pay patients without a primary care physician

The uninsured and under-insured populations seem to be putting off healthcare until they are in an urgent situation.

We find it more difficult to communicate about wellness and primary prevention. We have established a hospital immunization site in conjunction with our county health department to provide childhood immunizations. The uninsured and under insured status of much of this population strains our hospital's financial capabilities.

Follow up appointments are difficult. Filling prescriptions post-discharge for the elderly on fixed incomes is difficult. Readmissions for failure to follow up post discharge are too common.

The ER is often used inappropriately – patients need basic primary care, not ER services.

We are working with the community to establish a volunteer clinic.

We are looking at ways to make the facility more accessible to the elderly and disabled.

We have added a Swing Bed program for short-term rehab.

It appears that initiatives related to cultural competency, rural community health transportation, and prevention of chronic disease and affordable and accessible primary care are especially needed in the rural areas.

Data Management

The survey identified that most (74%) of responding critical access hospitals submit data to Hospital Compare through the U.S. Department of Health and Human Services. Further, responders indicated that they submit between four and nine data sets.

In addition, most (74%) share statistics with other outside entities. The following is an unduplicated list of entities mentioned.

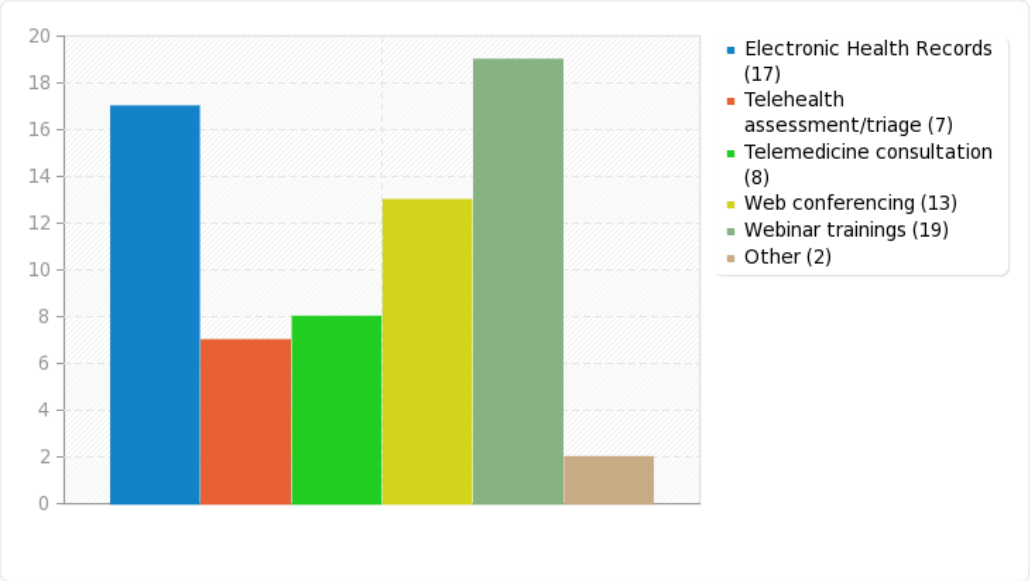
- Healthcare Excel
- Indiana Hospital Association
- JCAHO
- Anthem Hospital Quality Program
- CMS
- Leapfrog
- Indiana Rural Health Association
- Rural Performance Management
- KART
- Press Ganey
- Insurance Companies
- ISDH
- Indiana Rural Health Association
- National Healthcare Safety Network
- American Hospital Association
- IOPO
- INEDSS

The hospitals also participate in various benchmarking programs. Most submit data to the Indiana Hospital Association the Indiana Rural Health Association/RPM system, and Healthcare Excel Kart Tool.

Technology

Various technological applications are in place in the hospitals. The applications in greatest evidence were related to webinar trainings, web conferencing, and electronic health records. Telemedicine applications in use continue to demonstrate increases. This has been consistent over the past two years, although greater utilization in general is evident in all categories.

Figure 53. Technology Use, 2012.



Survey respondents were asked to identify barriers to greater telehealth/telemedicine use. This question invited respondents to check all that apply, creating multiple answers per respondent. The following table shows the frequency of issues selected from 2009 through 2012 surveys.

Figure 54. Barriers to Telehealth/Telemedicine Goals for Critical Access Hospitals.

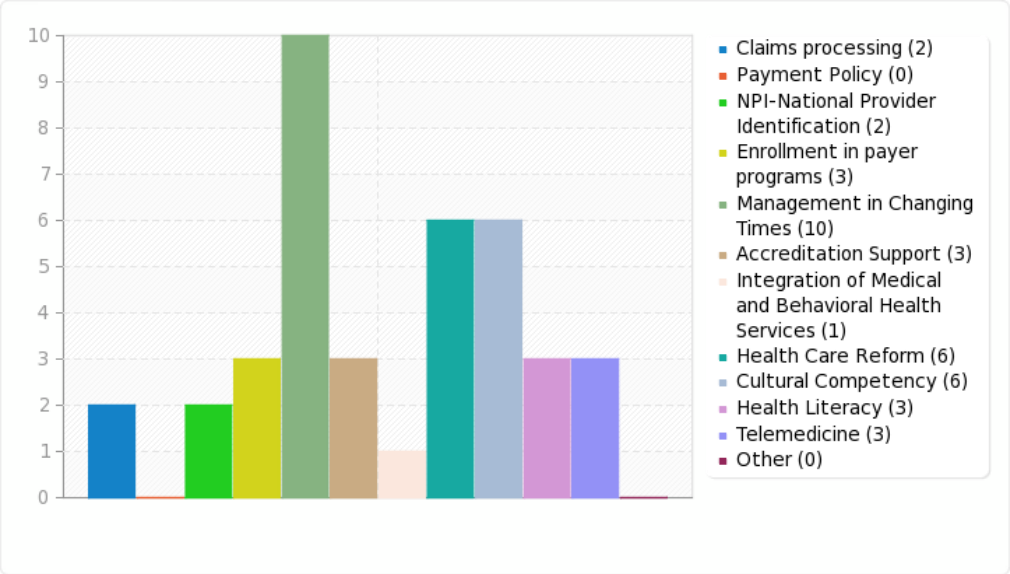
Barrier	# indicating the barrier 2009	# indicating the barrier 2010	# indicating the barrier 2011	# indicating the barrier 2012
Financial	13	12	9	9
Staff Time for Implementation	9	5	6	4
Bandwidth	6	2	2	1
Billable Rates	6	7	5	6
Staff Training Support	6	7	7	2
IT Support	4	6	4	1
Connectivity	4	1	4	2
FCC Match	2	0	2	0
Board Support	1	1	0	0
No barriers	**1**	**3**	**1**	**2**

It appears that the mechanical aspects of incorporating technology are being solved, although the staff and financial issues remain significant. Nine of the 2012 respondents identified a lack of physician support as an additional barrier.

Training Needs

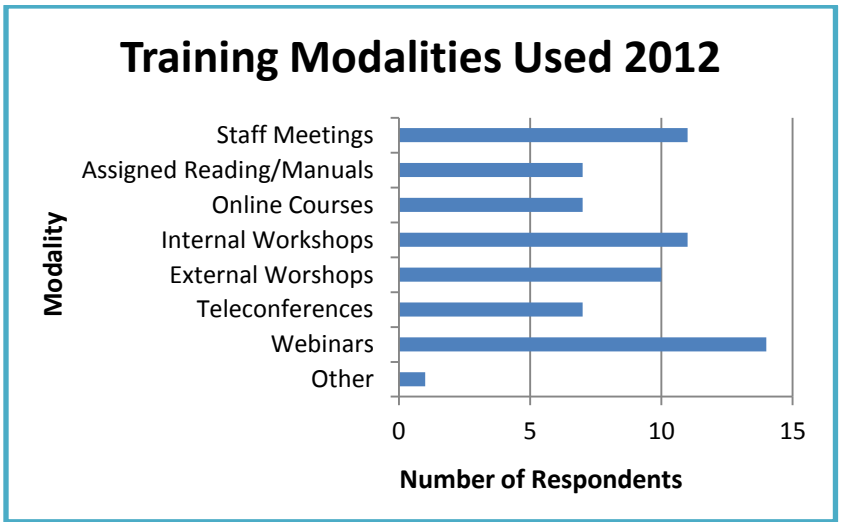
The training topics most needed by the critical access hospitals are summarized in the following table. Health Care Reform training led the list for the 2009, 2010, and 2011 surveys. Management in Changing Times heads the list in 2012, with Health Care Reform and Cultural Competency tied for the second highest training need. This appears to reflect the greater cultural diversity occurring in rural communities.

Figure 55. Training Topics Most Needed by Critical Access Hospitals, 2012.



The following graph demonstrates the types of modalities used as indicated by survey respondents. The modality cited in the "Other" category pertained to "In-house services".

Figure 56. Training Modalities in Use in Critical Access Hospitals, 2012.



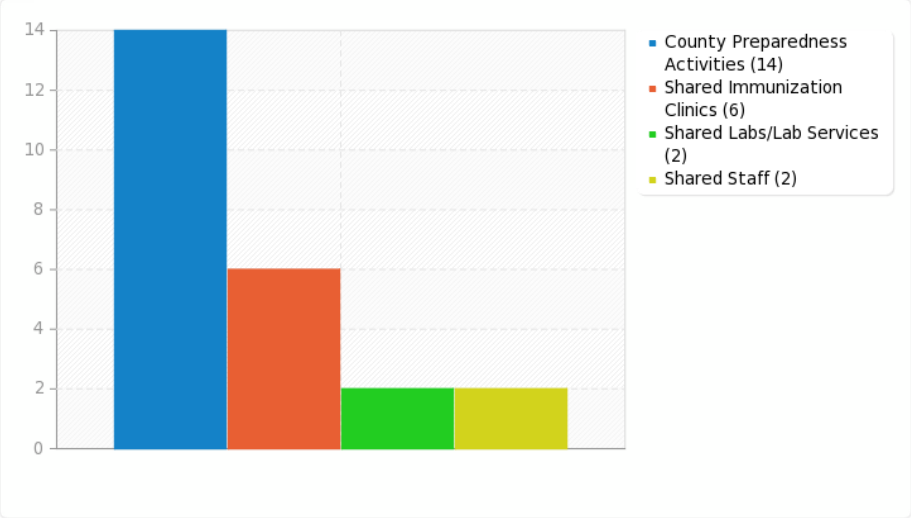
Training modalities most used by the critical access hospitals include staff meetings, internal workshops, and webinars. It appears that modalities that require little travel and minimal time away from the workplace are favored.

Approximately 21% of responding hospitals indicated that they currently maintain training contracts with outside entities, an increase over the 2011 level of 12%. eCareLearning was named as a provider with mandatory course offerings in web-based formats. Other entities cited included: The Studer Group, Stroudwater Associates, Purdue TAP, and Christ Medical Center. Overall annual training budgets shared by participating respondents ranged from $21,000 to over $150,000; however, only four responses were provided.

Interaction with Local Health Departments

In general, the survey results discovered that the critical access hospitals do not interact to a great degree with local health departments. The most often-cited affiliations fell under the categories of preparedness activities and shared immunization clinics.

Figure 57. Interaction with Local Health Departments, 2012.



Unmet Community Health Care Needs

In answer to a request for the top three unmet health care needs in their respective communities, seventeen different needs were identified. Some respondents included social and economic issues that they believe contribute to health care needs. These included: single parent families, unemployment, and a fragmented system of care. **Figure 58** below summarizes the needs identified.

Figure 58. Primary Unmet Health Care Needs Cited by Critical Access Hospitals, 2012.

Community Need
Timely Access to Primary Care
Weight Management Support
Behavioral Health Care (Mental Health and Addiction)
Specialty Care – General and Orthopedic Surgery
Transportation
Specialty Care - Psychiatry
Care for un/underinsured
Specialty Care - Endocrinology
Affordable/Accessible Dental Care
Specialty Care - Oncology
Specialty Care - ENT
Specialty Care - GI
Access to better nutrition
Diabetes Support
Wellness Education/screening
Insurance Coverage
Tobacco Cessation Support

Besides identifying issues, respondents were asked to supply potential solutions. The following solutions were suggested.

1. Develop educational tools
2. Educate citizens regarding primary care physician availability
3. Provide Wellness programs
4. Strengthen organizations to help us work together and share best practices
5. Funding for physician recruitment
6. Funding for the uninsured
7. Incentives for rural primary care physicians
8. Assistance for food banks
9. Youth programming
10. Feasibility study regarding the availability of affordable telemedicine equipment /networks to facilitate telemedicine services
11. Support more dietician counseling and intervention services
12. Increase funding and availability of smoking cessation programs
13. Fund primary prevention and education programs that link behaviors to the development of type 2 diabetes and the consequences of untreated diabetes
14. Funding for a low-income clinic
15. Funding/provision of health education for school-age children

The Indiana Office of Rural Health has formed a Flex Committee to meet quarterly. With this group in place and work plans from subsequent Flex and grants and other funding sources, the State Office of Rural Health will move forward to meet the needs of the Critical Access Hospitals and their respective communities.

Key Stakeholder Input from Indiana's Rural Roundtable

A second set of data was gathered through a survey process conducted with executives currently participating on the Indiana Rural Roundtable convened by Ann Alley, the Director of the Indiana State Office of Rural Health. This group meets quarterly to exchange information, network, and collectively begin to address universal healthcare needs affecting rural Indiana. These leaders provided information regarding gaps in health care viewed from their perspectives and tied their information to the ways in which their organizations support the efforts of Indiana's critical access hospitals.

The Indiana Rural Roundtable is viewed as a coalition to bring forward information and collaborative solutions to address rural health needs. It is also meant to streamline duplication and uneven distribution of information. Moving forward, those represented within the Rural Roundtable will apply energy to shared concerns through powerful collaborations for diversified funding, program development, and statewide models of care, technical assistance, and growth among entities concerned with the health care of rural citizens. The Indiana State Office of Rural Health relies upon these entities to identify needs, review models, and to attempt creative resolution of issues of care in rural areas.

The following individuals and their respective organizations are represented on the Rural Roundtable:

Figure 59. Rural Roundtable Participants, 2011 – 2012.

Name	Organization
Ann Alley	State Office of Rural Health
Don Kelso	Indiana Rural Health Association
Cindy Large	Flex Coordinator
Kathy Cook	Affiliated Service Provi1ders of Indiana, Inc.
Martha Levey	Affiliated Service Provid1ers of Indiana, Inc.
Phil Morphew	Indiana Primary Health Ca1re Association
Rick Kiovsky	Indiana AHEC
Jerry King	Indiana Public Health Association
Spencer Grover	Indiana Hospital Association
Angela Holloway	Indiana AHEC
Anna Garrett	Brain Injury Association of Indiana
Elizabeth Darby	Department of Workforce Development
Brittany Knick	State Office of Rural Health Manager
Carole Kacius	IU School of Medicine Dept. of Public Health

In June of 2012, a survey was emailed to Roundtable members. A copy of the survey questions is included in Appendix A. What follows is a summary of the responses to the survey.

Rural Roundtable Survey Response Summary (7 Respondents)

Question 1: From your perspective, what are the major barriers facing rural health care **consumers** in Indiana and what solutions would you recommend to address these issues?

Barrier	Solutions
Lack of Primary Care Physicians	• Improve attractiveness of rural living and practice • Fund the Loan Forgiveness Program passed in Indiana Legislature that pays extra for service in Rural and Underserved areas
Competing demands for attention (Economy, employment, costs of items) push down health care as a priority)	• No solution offered
Perception that rural health care is of less quality	• No solution offered
Health literacy	• Use students to help deliver needed health promotion programs to the community
Lack of providers who accept Medicaid and uninsured patients	• No solution offered
Rural population may not relate openly with a provider because they don't want to seem unknowledgeable.	• Increase provider skill in relating to rural populations.
Access to care; lack of specialty providers; lack of prenatal care	• Continue to develop the pipeline of rural providers and rural healthcare extenders • Encourage displaced workers to enter training for health care careers • Encourage more individuals from disadvantaged populations to enter training and become providers to disadvantaged populations • Improve scope of practice for Physician Assistants in Indiana • Increase Physician Assistant training programs • Create professional development opportunities to assist providers in understanding how to effectively utilize physician assistants in primary care
Inadequate safety net structure; lack of FQHCs in rural areas; inadequate funding	• Continue funding for safety net clinics

Question 2: From your perspective, what are the major barriers facing rural health care "**providers**" in Indiana and what solutions would you recommend to address these issues?

Barriers	Solutions
Traditional patient-centered medical home is less attractive	• Determine major barriers from providers' perspective
Perception that providers are not as competent/qualified to provide high quality care	• Expose more students to providers in these settings who may serve as good role models for students to encourage the students to consider working in rural areas
Communication gaps/cultural barriers with foreign trained physicians working in rural areas	• Assess the needs of local providers to determine their needs – training, resources, etc.
Reimbursement for primary care providers not sufficient to cover costs and allow for accepting Medicaid or establishing sliding fee scales for uninsured	• Provide additional incentives to encourage providers to consider working in areas of need such as tax breaks, differential reimbursement, debt re-payment
Access to best practices, decision support systems, and electronic health records	• Use videoconferencing and webinars for professional continuing education • Use telehealth for specialty access •
Not always a good match between provider and rural community if provider is not from rural community	• Develop stronger linkages between providers and local residency programs and other training programs
Salaries in rural areas tent to be lower; lifestyle less attractive	• Partner with health insurance companies to support pilot projects to help students understand the value of working in rural health • Provide debt re-payment, funding to key preceptors
Access to acute care, specialists	• Include inter-professional education in rural areas to help develop teams to address community health issues
Federal budget cuts	• Reallocation of funds

Question 3: How does your organization currently identify unmet community health care needs?

- Involvement in Community Health Needs Assessments (3)
- Direct discussion with constituents (5)
- Research (5)
- Secondary data (5)

Question 4: How does your organization currently address the needs of vulnerable populations?

- Provision of technical assistance and training (3)
- Advocacy efforts
- Emergency preparedness activities
- Partnerships with other organizations (2)
- Community-based student learning opportunities drawing from vulnerable populations
- Input from diverse group of board members
- Community needs assessments (3)
- Statewide Surveys
- Data analysis (3)
- Recruit students from rural and vulnerable populations to enter health care training programs
- Increasing provider base to better meeting the health care needs of the targeted population
- Cultural exposure in community-based settings
- Develop pilot for community rotations for family medicine residents in FQHC which can be used in rural FQHCs, state-funded CHCs and RHCs
- Development of comprehensive program evaluation strategy to track learners through the pipeline into practice have been developed and are being implemented for use in continuous quality improvement
- Provide education and telehealth possibilities

Question 5: How does your organization currently support Indiana's Critical Access Hospitals?

- Flex Program Evaluation
- Flex Program Strategic Planning
- Research on supply and demand for rural primary care health workforce in Critical Access Hospital market areas
- Networking
- Continuing Education programs (2)
- Board Education regarding CAHs
- Board recruitment to include CAH representation
- Community health centers provide support for CAHs
- Provision of contracted specialty consultation to CAHS
- Various Flex-related projects involving quality reporting/improvement, broadband access and education

Question 6: Does your organization support the Rural Health Priorities listed below?

Rural Health Priority	Activity
Access to Quality Healthcare	• Provides health care to 90 + counties • CHC services • Primary Care provision through network • Continuing and ongoing programs to identify and train students to prepare them for careers in primary care, rural, and medically underserved settings • Enhance telehealth options
Heart Disease and Stroke	• Online trainings • CHC services • Primary Care provision through network • CE offering: Getting with the Guidelines for Heart Failure • Creation and support of stroke network
Diabetes	• Diabetes Education Groups for Consumers • Online Trainings • CHC services • Primary Care provision through network • CE offering: The Art & Science of Diabetes Education
Mental Health and Mental Health Disorders	• Treatment through network • Continuing education for workforce • Workforce development for Certified Recovery Specialists • Integration of BH and PC • Enhance telehealth options
Oral Health	• CHC services with dental care where available
Tobacco Use	• Online trainings • Provider support and policy implementation • Consultation support for Bringing Indiana Along • Cessation Counseling • CHC services • Education and advocacy
Substance Abuse	• Treatment through network • Continuing education for workforce • Workforce Development for Certified Recovery Specialists with Substance Abuse Endorsement • Integration of BH and PC

Educational & Community Based Programs	• Education provided through network providers, webinars, online courses • Consumer outreach for gambling recovery • Participation on multiple committees and boards • Health career and educational enrichment programs for pre-health professions students and adults • Community-based clinical rotations and service learning programs for health professions students in primary care, rural, and medically underserved community settings • Education provided through conferences
Maternal, Infant & Child Health	• CHC services • Primary Care provision through network • CE offering: Perinatal Disparities Conference • Support through tobacco cessation programs
Nutrition and Overweight	• Online trainings • CHC services • Primary Care provision through network • Professional education
Cancer	• CHC services • Primary Care provision through network • Professional education
Public Health Infrastructure	• Integration of BH and PC • Education of undergraduate, master's level, and doctoral students. • HRSA-funded Public Health Training Center for continuing education offerings • Inclusion of information about careers in Public Health in all pre-health professions student health careers awareness programming and many health careers enrichment programs • Inclusion of staff on various committees
Immunization & Infectious Disease	• Monitoring of flu shots in residential facilities • CHC services • Primary Care provision through network • Board participation • Education and advocacy
Injury & Violence Prevention	• Training on related topics for professionals • CHC services • Primary Care provision through network • Professional education
Family Planning	• CHC services • Primary Care provision through network

Environmental Health	• Offer a BSPH in Environmental Health Science, and MPH in Environmental Health Science • All students do community internships in environmental health • Professional education

This small group of respondents representing less than half of the Rural Roundtable members generated a number of proposed solutions to rural health needs and demonstrated that they actively work to make positive change in provider skills, workforce expansion, organizational effectiveness, and health information and best practice dissemination. These organizations are involved in multiple collaborations and are well-known to each other, serving as a rural nucleus and forum for knowledge transfer and systems change. The outcome of this survey will serve as a foundation for further discussion within the group.

Data from both the Critical Access CEO survey and the Rural Roundtable reinforce one another. For example, issues of workforce recruitment and retention are presented through both surveys. The increasing importance of health information technologies to fill gaps in specialist care was identified in both. The need for continuing education for clinical practitioners and business leadership is recognized by all. As communities face economic hardship and high-need populations, the need for collaboration and creative solutions becomes even more evident.

Section V. Moving Toward a High Performance Rural Health Care System

The Indiana State Office of Rural Health

Established in 1992, the State Office of Rural Health (SORH) is located in Indiana State Department of Health's (ISDH) Primary Care Office (PCO). The mission of the SORH is to enhance the growth of public health services, funding sources, and educational opportunities for every rural Hoosier. The SORH lost its director in July of 2009 and will not be able to offer a state employee position to the replacement rather; a contractual position has been created. A full-time FLEX Coordinator position has been contractually created and is half funded with the SORH grant. The SORH operates with the Director of the PCO and a Grants Manager who serves as the SHIP Project Director as well as supporting general SORH activities. Additional operational and programmatic support is provided by the Office of Primary Care Manager through underserved area designation activities affecting National Health Service Corps placements in rural areas, the ISDH Finance Department that provides accounting and financial management of the SORH grant fund, and the ISDH Contract Division that assists contract execution through the state process. The PCO Director currently oversees the SORH, Flex, and SHIP programs. The PCO Contracts and Grants Manager administers the SHIP program for the office. The state program meets the program requirements of the authorizing statute.

Indiana has shown its commitment to SORH by fully funding SORH staff positions. Indiana funds the SORH Director and the Flex Coordinator/Quality Manager positions from federal SORH (director) and FLEX (Coordinator) monies. The SORH operates within the PCO and as such is able to leverage its federal and state funds in a more effectively to better serve all Indiana rural residents. Complementary--internal partners and programs within the PCO include the J-1 Visa Waiver Program, State Funded Programs for Community Health Centers, State Loan Repayment Program, National Health Service Corps, Shortage Designations, Trauma, Injury Prevention, and Spinal Cord and Traumatic Brain Injury Research and AHEC.

External Partners

The SORH works with external key partners to address rural health needs. These external partnerships broaden the SORHs capacity to enable core and additional statutory functions aimed toward improving access to health care and addressing health deficits.

- 35 Critical Access Hospitals
- Indiana Rural Health Association (IRHA)
- Indiana Hospital Association (IHA)
- Affiliated Service Providers of Indiana, Inc. (ASPIN)
- Richard G. Lugar Center for Rural Health
- Emergency Nurses Association (ENA)
- Indiana Statewide Rural Health Network (InSRHN)
- Area Health Education Center Program (AHEC)
- Telehealth Advisory Consortium (TAC)
- Indiana Health Information Exchange (IHIE)
- Indiana Primary Health Care Association (IPHCA)
- Indiana Department of Homeland Security

- Indiana Criminal Justice Institute (ICJI)
- Indiana Trauma Task Force
- Health Care Excel (HCE)
- Bowen Center for Health
- Indiana Bioterrorism and Preparedness Task Force
- Indiana Rural Health Association (IRHA)
- Indiana Hospital Association (IHA)
- Emergency Nurses Association (ENA)
- Indiana Statewide Rural Health Network (InSRHN)

The SORH's primary and collaborative partner is the **Indiana Rural Health Association** (IRHA). The office provides state, FLEX and SORH funds in support of the annual IRHA Rural Conference, various publications, and workshops. Through IRHA the SORH provides rural residents of Indiana the latest perspectives on local, state, regional, and national rural health initiatives. IRHA facilitates communication via site visits to CAHs for the purpose of determining individual technical assistance needs and community perspectives. SORH contracts with IRHA to provide a full-time FLEX Coordinator who will aid the FLEX Advisory Committee that was formed in August of 2009. Through IRHAs expertise, the SORH is increasing its reach into the CAHs and other rural serving entities. To accomplish this, IRHA is implementing data collection and evaluation activities to monitor and modify, as needed program planning, implementation, and evaluation efforts to assess progress toward the desired outcomes among rural health centers.

The SORH and the **Indiana Hospital Association** (IHA) have a productive working relationship which allows SORH to stay abreast of hospital insider concerns and opportunities. IHA holds a "Council on Rural" for all chief executive officers of CAHs and rural hospitals. At each of these meetings, SORH staff present findings on the most recent events and on assistance provided by SORH. IHA uses data collected by ISDH and SORH to address the needs of CAHs. IHA serves as a financial information warehouse and has shared information with other rural partners, including the SORH, IRHA, and CAH staff.

The **Lugar Center** for Rural Health has evolved as a tripartite partner in the areas of health care delivery, telemedicine and workforce development. Recently the SORH has partnered with the Lugar Center for Rural Health on telehealth and telemedicine projects. Other telehealth/ telemedicine partners include TAC and IHIE.

The SORH began working with **ASPIN** to explore behavioral and mental health issues pertaining to rural Hoosiers and has evolved into a rural health planning partner. **ENA** and the **Indiana Trauma Task Force** continue to enable the office to stay up to date on issues pertaining to emergency care and trauma system development. Indiana's Governor established a formal Trauma Committee by executive order this year. Partnerships have been established among **SORH, AHEC, IPHCA** (3RNet), and the **Bowen Center for Health**. AHEC and IPHCA represent the workforce recruitment and retention arm of Indiana, while the Bowen Center provides workforce research.

The **InSRHN**, a subsidiary organization of IRHA, and SORH are working to meet rural health network needs. These needs include increased financial viability and sustainability among

Indiana's rural healthcare providers that will ensure access to care for rural residents; increased access and use of Health Information Technology among Indiana's rural health care providers; increased connectivity among Indiana's rural health care providers that will enable the sharing of resources, services, implementation and participation in education programs, and increases in quality improvement activities among Indiana's rural health care providers.

IPHCA has assisted the Primary Care Office with developing clinical, governance, administrative, and financial standards for community health centers, 11 of which are designated as rural health clinics. IPHCA will assess the centers once standards are formally adopted in 2009, a final report of findings will be submitted.

SORH and the Office of Primary Care continue to capitalize on the opportunities present in local collaborations. IPHCA is developing a pilot project for community health center and local health department collaboration. IPHCA provides all necessary data and support for National Health Service Corps activities and provide all necessary data and support for health professional shortage areas, medically underserved populations areas, and J-1 visa waiver applications.

IPHCA is the 3RNet entity in Indiana. **3RNet is** made up of organizations such as State Offices of Rural Health, AHECs, Cooperative Agreement Agencies and State Primary Care Associations. These not-for-profit organizations help health professionals locate practice sites in rural and underserved areas throughout the country. Grant monies will be used to ensure outreach to rural providers.

The PCO/SORH is assessing how future state and federal resources should be deployed using medically underserved areas (MUAs), health professional shortage areas and both internal and publicly available data sets as components of an evaluation. The PCO, ISDH Geographic Information System (GIS) specialists, IPHCA and the SORH have formed a workgroup and will engage other community and federal partners once an access plan on the basis of the evaluation is drafted. Recommendations from this workgroup will be presented to the state health commissioner for her determination of where programmatic resources could be posited based on a geographically displayable definition of need, accessibility and health status.

In addition to ensuring a broad base of expertise to advise the direction of the program, the Indiana SORH is committed to the utilization and collection of data for assisting decision making and grants management. Every grant managed by the Indiana State Department of Health (ISDH) focuses on at least one of four health initiatives established by State Health Commissioner. The health initiative met through the SORH grant is the collection of data to promote ISDH's Data Driven Initiatives and Policies. The data collected through SORH initiatives will be disseminated to ISDH, as well as to rural health partners and will be posted on SORH's website for the public.

Growth of Telemedicine

Indiana has been fortunate in recent years in the area of technology development. The Indiana Rural Health Association is also providing a platform for technology use applicable to these efforts as it was the lead applicant in a grant funded by the Federal Communications Commission's (FCC's) Rural Health Care Pilot Program in 2007. Since that time IRHA has begun building a 100 megabit fiber network to all 35 critical access hospitals as a consortium partner in the Indiana Telehealth Network. This dedicated broadband can be used for multiple purposes including

telemedicine, health information exchange, distance education and training, public health surveillance, emergency preparedness and trauma system exchange development. In addition, IRHA was the lead applicant in a HRSA Outreach Network Grant that is creating telemental health within rural areas of Indiana. These combined resources, along with the SORH's dedicated portal form a strong foundation for the use of Flex funding to utilize broadband applications and secure a videoconferencing bridge to benefit all CAHs.

The Indiana Rural Health Association as lead agency, partnered with ASPIN and the Indiana Rural Health Specialty Exchange in a three year HRSA-funded Rural Outreach Grant expired in the spring of 2012. During the grant period 35 telemedicine units were placed in community mental health centers, addiction provider locations, critical access hospitals, and rural clinics to support small network telemedicine communication. As a result reduced days between medication management visits and reduced wait times were seen for behavioral health clients who were willing to receive care via telemedicine. The volume of telemedicine appointments through the grant period grew to approximately 800 visits by the end of the grant period. Incidental to the process was a familiarization with billing, increased satisfaction ratings by clients and clinicians, and contracting for specialty services to meet the needs of rural citizens.

In 2011, the Indiana Rural Health Association was the lead agency to receive a HRSA grant to fund the Upper Midwest Telehealth Resource Center (UMTRC) to cover Indiana, Ohio, Michigan, and Illinois. The UMTRC offers consultation to any organization or telehealth network to support the development of telehealth services. Through their efforts, CAHs, community mental health centers, FQHCs and rural health clinics have continued to develop expertise and interest in the use of telemedicine as a viable response to rural health needs.

Also in 2011, ASPIN received funding for the Indiana Veterans Behavioral Health Network to connect five rural access points to the Roudebush VA Center in order that rural veterans could receive behavioral health counseling from their Roudebush provider in Indianapolis.

Collectively, these examples of technological approaches to serve rural citizens are moving the state forward to meet the needs of rural citizens and resolve some issues of distance, time, and workforce limitations.

Other Initiatives

Some rural health care organizations are leading the way in Indiana to meet the health care needs of their constituencies through pilot programs in primary care/behavioral health care integration and through the provision of health primary care in behavioral health and school settings. These creative solutions are also a means to improve health care service and access for rural populations. With time and improved funding streams, these methods may continue to grow.

State Matching Fund Support

State funds pay for the time the PCO Director and Contract Manager devote to the program which strengthens state and local partnerships as a result of the programs the PCO oversees. In addition, state funds provide resources to rural health clinics through the Richard Lugar Center for Rural Health and Hoosier Uplands which, in addition to eight other clinics serve tens of thousands of rural patients a year. Grant funds for these rural health centers are awarded based on state funding

criteria. The Indiana Rural Health Plan is a living document that captures the economic, workforce, and health care needs of counties served by Indiana's critical access hospitals. The needs assessment processes used informed the SORH regarding areas that can be addressed through Flex funding and set the tone for the office's future collaborations. Indiana's rural populations are at the center of multiple forces that can work in concert to improve and sustain health. Indiana is fortunate to have established partnerships on a statewide level that are focused on issues of workforce development, quality service delivery, patient safety, emerging telehealth connectivity, data gathering and analysis, training, and collaboration.

Movement toward an integrated system of care is especially challenging in rural areas as many essential services *(*e.g., hospital and physician services, behavioral health, dental care, and EMS services) are not available in many small communities. As a result, it is critical to develop linkages with providers in other communities and to use the technology as effectively as possible. The SORH maintains interest and support for emerging technologies and models of cooperation that bring high quality coordinated and culturally sensitive care to Indiana's rural populations while supporting viable revenue streams for providers.

Through a review of secondary sources as well as through a dual survey process of key rural health leaders and statewide organizations addressing rural health care, the Plan establishes five directives to be addressed in its work plan. These include (1) support collaborative solutions to issues of rural health service quality and access, (2) provide equitable and accountable funding strategies for appropriate projects resulting in improved care and/or provider accountability for rural citizens, (3) utilize existing expertise already working on rural health issues to the greatest degree possible, (4) aid in accountability of clinical practice and financial acumen of rural providers, and (5) act as a conduit of accurate information to and from critical access hospitals, rural providers, training experts, and state policy makers.

Goals Integration

Within these broad directives, the goals of the various funding bodies that support the work of the State Office of Rural Health are assured. In addition, the goals are in alignment with Flex Goals, the **Healthy People 2020 Goals**, and the **Ten Essential Public Health Services**. The following graphic demonstrates the interplay of these initiatives. The impact of the development of the Indiana Rural Health Plan and the distribution of Flex funding in the current year is in alignment with local and national priorities. The Indiana Rural Health Plan is a catalyst for forward movement of initiatives and collaborations in place within the state through integration of programmatic goals, cross-discipline training, information exchange, and partnership development.

The following graphic demonstrates the ways in which all efforts undertaken by the State Office of Rural Health are complementary in terms of moving the focus areas of funders and stakeholders forward through its various initiatives.

Figure 60. Goals Integration.

State Rural Health Plan Theme	State Rural Health Plan Goal	Flex Core Areas	Healthy People 2020/Rural Healthy People 2010 Goal Alignment	Public Health Essential Services Alignment
1. Support collaborative solutions to issues of rural health services quality and access.	**Coordination of rural health resources and activities Statewide.**	**Support for Health System Development and Community Engagement** Statewide CAH Quality Program for CAH Readmissions	HP 1, 2, 3, 4 RHP 1 - 12	3, 4, 5, 7, 8
2. Provide equitable and accountable funding strategies for appropriate projects resulting in improved care and/or provider accountability for rural citizens	**Provision of technical assistance.** Provides contract management oversight to all partners receiving rural health funding through SORH, FLEX and SHIP. Is the fiscal agent for the HIT-CAH grant.	**Support for Operational and Financial Improvement** Statewide CAH Reporting Program	HP 1, 2, 3, 4 RHP 1-12	4, 5, 9, 10
3. Utilize existing expertise already working on rural health issues to greatest degree possible.	**Provision of technical assistance.** Support rural health partners as needed.	**Support for Health System Development and Community Engagement** Statewide CAH Educational Programs	HP 2, 3, 4 RHP 1, 2, 3,	1, 4, 8, 9, 10
4. Aid in accountability of clinical practice and financial acumen of rural providers.	**Provision of technical assistance.** Support rural health partners as needed.	**Support for Quality Improvement** Statewide CAH Reporting Program Statewide CAH Quality Program for CAH Readmissions	HP1,2, 3, 4 RHP 2-12	1, 2, 3, 5, 6, 8, 9, 10
5. Act as conduit of accurate information to and from Critical Access Hospitals, rural providers, training experts, and state policy makers.	**To improve collection and dissemination of information.**	**Support for Health System Development and Community Engagement** Statewide Videoconferencing and e-learning Program	HP 1, 2, 3, 4 RHP 1 - 12	1, 3, 4, 5, 6, 8, 10

The Indiana Rural Health Work Plan for 2011-2012 creates movement across 5 key themes identified through survey processes. These themes include:

a. Support collaborative solutions to issues of rural health services quality and access.
b. Provide equitable and accountable funding strategies for appropriate projects resulting in improved care and/or provider accountability for rural citizens
c. Utilize existing expertise already working on rural health issues to greatest degree possible.
d. Aid in accountability of clinical practice and financial acumen of rural providers.
e. Act as conduit of accurate information to and from Critical Access Hospitals, rural providers, training experts, and state policy makers.

This plan is meant to be a working document that will expand and contract as work is completed and new projects added under each theme.

Alignment with Wider Initiatives

Healthy People 2020 Goals

All rural initiatives developed and/or supported through the Indiana State Office of Rural Health are in support of the four primary goals outlined in **Healthy People 2020** which provides a 10-year agenda for improving the nation's health.

Healthy People 2020 strives to identify nationwide health improvement priorities, increase public awareness and understanding of the determinants of health, disease, and disability and the opportunities for progress. It also provides measurable objectives and goals that are applicable at the national, state, and local levels. Its aim is to engage multiple sectors to take actions to strengthen policies and improve practices that are driven by the best available evidence and knowledge. In addition, the initiative seeks to identify critical research, evaluation, and data collection needs. **Healthy People 2020** established four overarching goals:

1. Attain high quality, longer lives free of preventable disease, disability, injury, and premature death;
2. Achieve health equity, eliminate disparities, and improve the health of all groups;
3. Create social and physical environments that promote good health for all;
4. Promote quality of life, healthy development, and healthy behaviors across all life stages.

Rural Healthy People Goals

The **Rural Healthy People 2010** report is intended to inform constituents regarding current rural health conditions and provide insights into possible methods to improve rural health conditions. The report is a companion to **Healthy People 2010**, and identifies ten areas of health concern especially prevalent in rural areas. These include: (1) access to insurance, (2) access to primary Care, (3) access to emergency medical services, (4) heart and stroke, (5) diabetes mellitus, (6) mental health and mental disorders, (7) oral health, (8) tobacco use, (9) substance abuse, (10) maternal infant and child health, (11) nutrition and overweight, and (12) cancer. These are issues

noted in surveys of Critical Access Hospitals and statewide associations as ones that are of great concern in Indiana at this time. The updated version, **Rural Health People 2020,** has not been released as of this writing.

The Essential Public Health Services

The Essential Public Health Services (1994) provide a fundamental framework by describing the public health activities that should be undertaken in all communities. The Core Public Health Functions Steering Committee developed the framework for the Essential Services in 1994. This steering committee included representatives from US Public Health Service agencies and other major public health organizations.

The Essential Services provide a working definition of public health and a guiding framework for the responsibilities of local public health systems. The Indiana Office of Rural Health relates these ten essential services to its efforts.

1. Monitor health status to identify and solve community health problems.

2. Diagnose and investigate health problems and health hazards in the community.

3. Inform, educate, and empower people about health issues.

4. Mobilize community partnerships and action to identify and solve health problems.

5. Develop policies and plans that support individual and community health efforts.

6. Enforce laws and regulations that protect health and ensure safety.

7. Link people to needed personal health services and assure the provision of health care when otherwise unavailable.

8. Assure competent public and personal health care workforce.

9. Evaluate effectiveness, accessibility, and quality of personal and population-based health services.

10. Research for new insights and innovative solutions to health problems.

Rural Health Work Plan Summary

The impact of the development of the Indiana Rural Health Plan and the distribution of Flex funding in the current year is in alignment with several national priorities, notably those that support improved emergency medical care through training regarding trauma response, through support for telehealth expansion to meet specialist demand in emergency care, and through careful assessment of rural health care needs and focus on removing disparities in care and access. The Indiana Rural Health Plan is a catalyst for forward movement of initiatives and collaborations in place within the state.

References

Public Health Functions Steering Committee, Members (1994). The ten essential public health services. Retrieved August 18, 2009, from http://www.cdc.gov/od/ocphp/nphpsp/essentialphservices.htm

U.S. Department of Health and Human Services. (2010).*Healthy People 2020.Retrieved from www.healthypeople.gov*.

VI. Summary

Previous Sections of this plan have described many barriers and challenges to delivering health care services in rural Indiana. For example, in some areas there is not a sufficient supply of health professionals to care for complex and chronic populations. Also, most areas have lost revenue because of challenging economic times. Finally, most areas have not developed a well-coordinated and integrated health care delivery system offering medical homes and team approaches to service delivery.

A rural integrated health system is based on the following assumptions:

1. An integrated system requires accurate data, planning, communication systems, and methods applicable to the needs of specific geography and populations.
2. Multiple and diverse approaches are necessary because of the differences in the needs of the population, the economic characteristics of the area, and the local culture.
3. Integrated systems should foster cooperation, collaboration, and integration of services and activities, including innovative technology such as telecommunication.
4. Although the planning of an integrated system should begin at the community level, the collaborative network must be expanded to include other hospitals, physician and dental clinics, pharmacies, EMS units, nursing homes, behavioral health services, and public health services in a region. It must also extend to regional and urban centers because rural patients need the specialized services offered in larger communities.
5. All integrated systems should develop performance measures based on the six quality aims (safety, effectiveness, patient-centeredness, timeliness, efficiency, and equity) that were developed by the Institute of Medicine (2005) to evaluate the overall performance of each health care delivery system.
6. An integrated system should focus on both population health and personal health.

Providers in rural Indiana communities often practice independently of one another. This lack of coordination is frequently the result of previous practice models and of poor communication. It is magnified by the shortage of health professionals and frequent referrals or transfers to providers in larger communities. As a result, many patients and families must navigate unassisted across different providers and care settings. The lack of communication and clear accountability for a patient among multiple providers may lead to medical errors, waste, and duplication of care (Shih, Davis, Schoenbaum, Gauthier, Nuzum, & McCarthy, 2008).

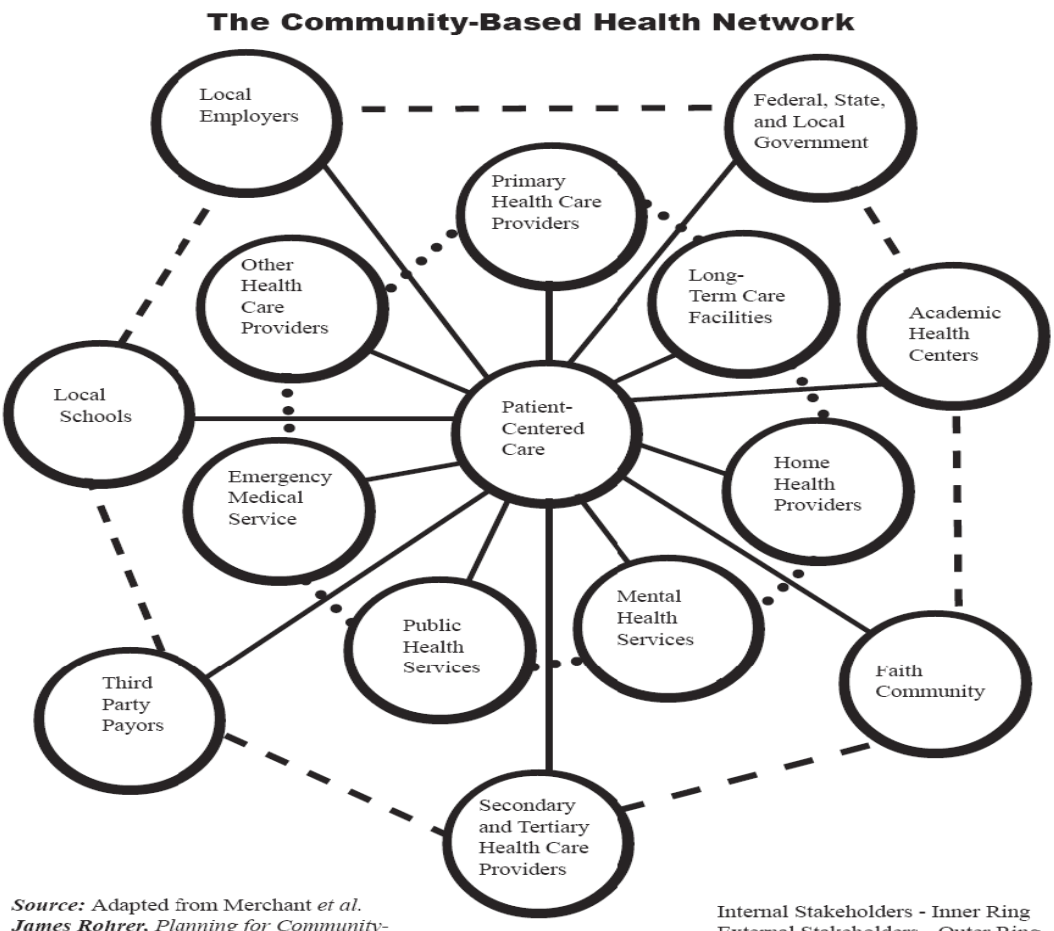
According to the Commonwealth Fund Commission on a High Performance Health System (2008), there are six attributes of an ideal health care delivery system. These attributes are:

1. Patients' clinically relevant information is available to all providers at the point of care and to patients through electronic health records.
2. Patient care is coordinated among multiple providers, and transitions across care settings are actively managed.
3. Providers (including nurses and other members of care teams) both within and across settings have accountability to each other, review each other's work, and collaborate to reliably deliver high-quality, high-value care.

4. Patients have easy access to appropriate care and information, including after hours; there are multiple points of entry to the system; and providers are culturally competent and responsive to patients' needs.
5. There is clear accountability for the total care of patients.
6. The system is continuously innovating and learning in order to improve the quality, value, and patients' experiences of health care delivery.

A system with these attributes is likely to be more achievable in rural areas for many reasons. Rural health care systems are smaller and can be coordinated more quickly. Rural providers are generally more knowledgeable about and more familiar with their patients. Some emerging systems of care have the potential to achieve this ideal because of excellent leaders, existing associations, and cooperative alliances capable of guiding the development of these new delivery systems within the state of Indiana.

Figure 61. The Community-Based Health Network.



Source: Adapted from Merchant *et al.* ***James Rohrer,*** *Planning for Community-Oriented Health Systems* (Washington, D.C.: American Public Health Association, 1996).

It is clear that community health and health care are influenced by multiple institutions and influences upon a given community. Indiana's rural populations are at the center of multiple forces that can work in concert to improve and sustain health. Indiana is fortunate to have established partnerships on a statewide level that are keenly focused upon issues of workforce development, quality service delivery, patient safety, emerging telehealth connectivity, data gathering and analysis, training, and collaboration.

Movement toward an integrated system of care is especially challenging in rural areas as many essential services *(*e.g., hospital and physician services, behavioral health, dental care, and EMS services) are not available in many small communities. In addition, the needs of each community are unique. The challenge to planning is to provide sufficient latitude for individual communities to find relevant and effective solutions to address the special populations and unique demographics present within their service areas. As a result, it is critical to develop linkages with providers in other communities and to use the technology as effectively as possible. The State Office of Rural Health maintains interest and support for emerging technologies and models of cooperation that bring high quality coordinated and culturally sensitive care to Indiana's rural populations while supporting viable revenue streams for providers.

References

Institute of Medicine (2005). *Quality Through Collaboration: The Future of Rural Health.* Washington, DC: The National Academies Press.

Shih, A., Davis, K., Schoenbaum, S., Gauthier, A., Nuzum, R., & McCarthy, D. (August 2008). *Organizing the U.S. Health Care Deliver System for High Performance.* New York, NY: The Commonwealth Fund.

The Medicare Rural Hospital Flexibility Steering Committee (2008).*Nebraska Rural Health Plan.*

Appendix A – Survey Forms

1. Critical Access Hospital Survey 2012
2. Statewide Associations Focus Group Survey

Appendix A

Indiana State Department of Health Survey of Critical Access Hospitals (2012)

The Critical Access Survey is divided into five sections that can be forwarded as distinct survey links. In this way, each hospital CEO may forward a link for a given section to a key informant most able to respond accurately to that section. The CEO is primarily responsible for assuring that all sections are completed in a timely manner.

Section 1 – Administrative

1A. Name of Organization:

2A. Rank your organization's greatest concerns as you look forward to the next two years Please number each box in order of preference from 1 to 15.

Health Care Reform Impacts
Reimbursement
Recruiting/Retaining Physicians
Expansion of Services
Rules and Regulations
Financial Performance
Recruiting/Retaining Nurses
Strategic Planning
Succession Planning
Information technology
Electronic Medical Records
Telemedicine
Patient Safety
Health Outcomes
Other

3A. If you selected "Other" in the previous question, please list it here.

4A. What vulnerable populations require special considerations regarding care in your facility? Please identify.

5A. How does meeting the needs of the population listed above affect your services? Please explain.

6A. Do you currently submit data to Hospital Compare through the U.S. Department of Health and Human Services?

- Yes
- No

7A. If yes to the above question, how many data sets do you submit?

8A. Do you share statistics with other outside entities?
- Yes
- No

9A. If yes to the above question, list those entities.
- Entity One
- Entity Two
- Entity Three
- Entity Four
- Entity Five

10A. How is data transmitted to the outside entities?
- Entity One
- Entity Two
- Entity Three
- Entity Four
- Entity Five

11A. Check all benchmarking systems to which your organization provides data
Please choose all that apply:
- IRHA/RPM/Performance Management Institute benchmarking tool
- Indiana Hospital Association
- Healthcare Excel KART Tool
- Other:

12A. What are the three primary unmet community healthcare needs of citizens in your community?

13A. How can the FLEX Program assist in addressing these needs? List one strategy for each concern cited above.

14A. In what ways do you interact with the local health department? Choose all that apply.
- County Preparedness Activities
- Shared Immunization Clinics
- Shared Labs/Lab Services
- Shared Staff

15A. What, if any, Health Information Technology devices do you currently use? Choose all that apply.
- Electronic Health Records
- Telehealth assessment/triage
- Telemedicine consultation

- Web conferencing
- Webinar trainings
- Other:

16A. What are the barriers to your telehealth/telemedicine goals? Choose all that apply.

- None
- Financial Constraints
- FCC Match
- Connectivity
- Bandwidth
- Staff training/support
- Board Support
- IT Support
- Billable Rates
- Staff time for implementation
- Lack of physician support

17A.Please provide additional comments here.

Section 2 – Financial

1F. Name of Organization:

2F. What is your payer mix (by percentage, total should equal 100%)?

- Medicaid
- Medicare
- Commercial
- Uninsured/Self
- Charity

3F. Has local funding been cut to your facility?

- Yes
- No

4F. If local funding has been cut, estimate the extent from each source.
Please choose all that apply and provide a comment:

- State Dollars:
- County Dollars:
- Other:

5F. Has your organization taken on new services due to local government spending reductions?

- Yes
- No

6F. If yes to the previous question, which services has your organization added or expanded?

7F. Has your organization discontinued any services due to changes in funding?
● Yes
● No

8F. If yes to the above question, which services were eliminated?

9F. Have plant closings, downsizings, and/or business failures in your communities impacted your hospital's payor mix since July 2011?
● Yes
● No

10F. If yes to the previous question, list each company and estimated job losses since July 2011.
Please choose all that apply and provide a comment:
● Company One (jobs lost)
● Company Two (jobs lost)
● Company Three (jobs lost)
● Company Four (jobs lost)
● Company Five (jobs lost)

11F. Please provide additional comments here.

Section 3 – Human Resources

1H. Name of Organization:

2H. What is your overall personnel turnover rate expressed as FTEs?

3H. Has your organization conducted a recent RIF due to economic trends since July 2009?
● Yes
● No

4H. If yes to the above question, how many FTEs were released?

5H. On average, how many full-time positions are open in a given week?

6H. On average, how many part-time positions are open in a given week?

7H. What essential positions are hardest to recruit?
Please choose all that apply:

- Nurses
- Primary Care Physicians
- Advanced Practice Nurses
- Specialty care MDs
- Pharmacists
- Psychiatric Nurses

8H. If Specialty MDs was checked above, please specify.

9H. What types of training resources are most often used by staff at your facility? Check all that apply.
Please choose all that apply:
- Webinars
- Teleconferences
- Training workshops (internal)
- Training workshops (external)
- Self-paced online courses
- Assigned reading/manuals
- Staff meetings
- Other:

10H. From which of the following training topics would your organization most benefit?
Please choose all that apply:
- Claims processing
- Payment Policy
- NPI-National Provider Identification
- Enrollment in payer programs
- Management in Changing Times
- Accreditation Support
- Integration of Medical and Behavioral Health Services
- Health Care Reform
- Cultural Competency
- Health Literacy
- Telemedicine
- Other:

11H. Do you currently have contracts with third party organizations for staff training?

If the answer is yes to Question 10, please complete Questions 12, 13, 14, and 15. If no, you may skip to Question 16.

12H. Please identify the third party organization(s).

13H. Are these trainings:

All Mandatory ___yes ___no
All Voluntary ___yes ___no
Mixture of Mandatory and Voluntary ___yes ___no

14H. Are these trainings:
Traditional Face-to-Face ___yes ___no
Web-based (webinars or teleconference) ___yes ___no
Online courses ___yes ___no

15H. Please provide an estimate of total training budget for your facility.

16H. Please provide additional comments here.

Appendix A

Rural Roundtable Survey for Indiana Office of Rural Health State Plan

Organization:
_____Date:_____

1. From your perspective, what are the major barriers facing rural health care **"consumers"** in Indiana and what solutions would you recommend to address these issues?

2. From your perspective, what are the major barriers facing rural health care "**providers"** in Indiana and what solutions would you recommend to address these issues?

3. How does your organization currently identify unmet community health care needs?

4. How does your organization currently address the needs of vulnerable populations?

5. How does your organization currently support Indiana's Critical Access Hospitals?

6. Does your organization support the Rural Healthy Priorities identified in Rural Healthy People 2010 listed below? Check all that are a focus and briefly list the activities you conduct that support each priority.

_____Access to Quality Healthcare
Activity:_____
_____Heart Disease and Stroke
Activity:_____
_____Diabetes
Activity:_____
_____Mental Health & Mental Disorders
Activity:_____
_____Oral Health
Activity:_____
_____Tobacco Use
Activity:_____
_____Substance Abuse
Activity:_____
_____Educational & Community Based Programs
Activity:_____
_____Maternal, Infant & Child Health
Activity:_____
_____Nutrition & Overweight
Activity:_____
_____Cancer
Activity:_____
_____Public Health Infrastructure
Activity:_____

_____Immunization & Infectious Disease
Activity:_____
_____Injury & Violence Prevention
Activity:_____
_____Family Planning
Activity:_____
_____Environmental Health
Activity:_____

Please return to Martha Levey (mlevey@aspin.org). Thank you for your input.

Appendix B – Work Plans and Evaluations

1. Flex Grant Work Plan
2. Indiana State Office of Rural Health Work Plan
3. Flex Evaluation

Appendix B - Flex Work Plan

Goals Alignment with Healthy People 2020:

The following table links **Flex Program** Goals within Core Areas to **Rural Health Plan** themes and **Healthy People 2020** Goals.

Health People 2020	***Flex Program Goals***	***Objectives***	***Rural Health Plan Themes***
Access to Quality Health Services in Rural Areas – Primary Care, EMS, cancer, diabetes, heart disease and stroke, maternal, infant and child health, mental health, nutrition/overweight, oral health, substance abuse, and tobacco use in rural areas 1. Attain high quality, longer lives free of preventable disease, disability, injury, and premature death; 2. Achieve health equity, eliminate disparities, and improve the health of all groups; 3. Create social and physical environments that promote good health for all; 4. Promote quality of life, healthy development, and healthy behaviors across all life stages	Program Goal 1: *Core Area 1: Provide CAH Support for Quality Improvement (QI)* Program Goal 2: *Core Area 2: Provide CAH Support for Operational and Financial Improvement*	Development of a ***Statewide CAH Reporting Program*** for quality reporting and benchmarking initiatives • Develop a statewide data reporting and sharing system via a secured portal for data exchange will allow early recognition of trends in health care populations for disease management. • Support Critical Access Hospitals in building upon multi-hospital quality improvement project involving hospital readmissions *targeting chronic diseases* to increase patient safety and quality of care among Critical Access Hospitals' rural residents in Indiana. • Increase access to care for specialty and subspecialty services through telehealth initiatives. • Support Critical Access Hospitals' planning and implementing evidence-based strategies for improving performance.	1) Support collaborative solutions to issues of rural health services quality and access (HP 1&2) 2) Provide equitable and accountable funding strategies for appropriate projects, resulting in improved care and/or provider accountability for rural citizens (HP 1&2) 3) Utilize existing expertise already working on rural health issues to greatest degree possible (HP 1&2) 4) Aid in accountability of clinical practice and financial acumen of rural providers (HP 1&2) 5) Act as conduit of accurate information to and from Critical Access Hospitals, rural providers, training experts, and state policy makers (HP 1&2)

Health People 2020	***Flex Program Goals***	***Objectives***	***Rural Health Plan Themes***
HP 1 Access to Quality Health Services in Rural Areas – Primary Care – Disparities among other Specialties HP 2 Access to Quality Health Services in Rural Areas – EMS – known cause of the condition or problem so effective interventions or solutions can be identified HP 4 Heart Disease and Stroke in Rural America – known causes of the condition so effective interventions or solutions can be identified HP 6 Mental Health and Mental Disorder – utilization and supply of mental health providers AHS HP2020 – 7, 8, 9 HDS HP2020 – 1-23 MHMD HP2020 1-14		Development of a ***Statewide CAH Quality Program*** for CAH Readmissions and TeleStroke • Provide access to specialty and subspecialty physicians through telehealth services (specifically, stroke neurologists year 1) • Through the TeleStroke network, the patient presenting to the emergency room with stroke signs and symptoms will have access to consult's accurate diagnosis and receive the appropriate treatment • By expanding telehealth programs to telemental health in years 2 – 5, access to mental health services will be available	

Health People 2020	***Flex Program Goals***	***Objectives***	***Rural Health Plan Themes***
HP 1 - 10 Access to Quality Health Services in Rural Areas – Primary Care, EMS, cancer, diabetes, heart disease and stroke, maternal, infant and child health, mental health, nutrition/overweight, oral health, substance abuse, and tobacco use in rural areas ECBP HP2020 -3,7		Development of a ***Statewide CAH Educational Program*** for managers, staff and/or board members of CAHs, focusing on leadership and organizational culture • Educational programs can provide a platform for peers sharing best practices on specific disease processes and related issue	
HP 1 - 10 Access to Quality Health Services in Rural Areas – Primary Care, EMS, cancer, diabetes, heart disease and stroke, maternal, infant and child health, mental health, nutrition/overweight, oral health, substance abuse, and tobacco use in rural areas HP 4 Heart Disease and Stroke in Rural America – known causes of the condition so effective interventions or solutions can be identified HP 6 Mental Health and Mental Disorder – Barriers ECBP HP2020 - 1 -12 HC/HIT HP2020 – 1- 5	*Core Area 3: Provide CAH Support for Health System Development and Community Engagement*	Development of a ***Statewide Videoconferencing and e-learning Program*** to increase statewide communication for meetings, training, and education • Develop and expand use of electronic tools and e-learning to enhance communication, training and education, and interaction among Critical Access Hospitals in Indiana to increase access to health care services by residents in Indiana. (.i.e., HP 4 diabetes , HP 6 mental health education) • Virtual educational programs can provide a platform for patient education, staff education, and peers sharing best practices on specific disease processes and related issue	

Health People 2020	***Flex Program Goals***	***Objectives***	***Rural Health Plan Themes***
HP 1 Access to Quality Health Services in Rural Areas – Primary Care and Specialties AHS HP2020 1-10	Program Goal 4: *Core Area 4: Facilitate Conversion of Small Rural Hospitals to CAH status*	***Facilitate Conversion of Small Indiana Rural Hospitals to CAH Status (2011 – 2015)*** to facilitate appropriate conversion of small rural hospitals to CAH status in accordance with federal and state regulation • By converting to CAH status, many rural providers are able to improve financially and operationally	

Appendix B – State Office of Rural Health Work Plan

Goals	Objectives	Products/ Services/ Activities	2011 Progress and Process Measures	Qualitative Impact/Result
To improve collection and dissemination of information.	Collect and disseminate information concerning rural health. Provide up to date education, alerts and communication through several mediums.	The SORH has updated materials on the Agency website. We are working with State web developers to attain a more prominent position on the Agency site.	The State Office of Rural Health page on the ISDH website is available and continues to be updated.	Relevant information including underserved HPSA area maps and state loan repayment program information has been posted to the website and serves as a clearinghouse for SORH data, information, and opportunities.
		Use email to communicate funding, educational, and collaborative opportunities.	As pertinent information is made available to the SORH it is emailed through the Flex Coordinator to avoid duplicate messages. Email is shared with pertinent rural health partners, including CAHs, RHCs and staff.	Rural partners have been able to use information as technical assistance and have applied for funding from shared grant opportunities.

Goals	Objectives	Products/ Services/ Activities	2011 Progress and Process Measures	Qualitative Impact/Result
		Sponsor the Indiana Rural Health Association Annual Conference	465 individuals attended the 2010 annual conference which included five concurrent sessions with five tracks per session (25 breakout sessions) and three keynote presentations. Session Tracks: Quality Improvement, Health Information Technology, Clinical Education, Leadership Initiatives, and Emergency/Disaster Preparedness Keynote Speakers' Topics: Connecting the Health Care Dots, National Update on Healthcare Reform, and Rebooting Health Care	Survey of conference participants indicated they received the following new information: • Understand the discrete interrelationships between quality improvement, health information technology, clinical education, leadership initiatives, and emergency preparedness impact on small towns and communities • Understand how information exchange with new technology will be a driving force for Indiana's continued excellence in health care • Apply contemporary knowledge about health care quality to the smaller rural provider setting • Identify practices and technologies rual providers can implement to improve patient care • Develop an understanding of how telehealth can benefit rural hospitals and Communities • Learn about incorporating information technology and telemedicine into rural practice • Develop knowledge of current regulatory concerns as they apply to rural practice setting • Improve the understanding of the Electronic Medical Records and the impact the trends will have on rural health in Indiana • Develop better awareness regarding emergency preparedness in rural communities in Indiana • Identify methods and techniques for recruitment and retention in rural hospitals • Examine the latest technology in health care from the exhibitors • Enable networking with students in the health profession to help them better understand the culture of rural populations.

Goals	Objectives	Products/ Services/ Activities	2011 Progress and Process Measures	Qualitative Impact/Result
		Provided sponsorship to the AHEC Interprofessional Education Summit	Indiana University, through its Indiana Area Health Education Centers Program, conducted a two day conference for educators, clinical practitioners, university administrators and hospital administrators.	Objectives of the program include: • Explain leadership perspectives and success strategies derived from recent interprofessional implementation cases; • Review the function and value of interprofessional education in health professions training programs; and • Describe the impact of interprofessional education and interprofessional care teams on healthcare delivery
		Assess the needs of the CAHs	Created survey and received input from CAH CEOs.	Survey results were presented to rural health partners and were used to influence program design and resource distribution for the FLEX and other rural health programs in Indiana
		Disseminate information to rural providers Ensure topics vary and pertain to rural health	IRHA provides four quarterly workshops. Over 100 individuals have attended events and multiple rural health topics have been offered.	The four workshops provided to the CAHs were: • August 12, 2010 What is Telehealth Doing for you? Indiana Success Stories • August 13, 2010 Leadership Seminar • November 30 – December 1, 2010 HIT or Miss: Health Information Technology Summit • March 3, 2011 Spring into Quality Symposium Evaluations show information relevant and useful
			State rural health plan will be presented and posted online.	The state rural health plan draft has been presented to university and rural health partners. It will be presented on March 3, 2011 to the Flex Advisory Committee.

Goals	Objectives	Products/ Services/ Activities	2011 Progress and Process Measures	Qualitative Impact/Result
		Convene Rural Health Roundtable for rural health partners to share relevant information	Rural Health Roundtable meets regularly to discuss current rural health issues and share information among the rural health partners. Rural Health Roundtable has rural health partners from Indiana Rural Health Association, Indiana Public Health Association, Indiana University, Indiana Hospital Association, Health Care Excel, Indiana Primary Health Care Association, and ASPIN.	The Rural Health Roundtable has conducted several meetings. At these meetings, a variety of rural health topics have been discussed. These topics include: • State Health Care plan • FQHC and CAHs issues and updates • Updates on grants • Health Care Workforce • Educational opportunities / upcoming conferences
Coordination of rural health resources and activities Statewide	Coordinate opportunities with rural partners	IRHA performing on-site visits to rural partners	Six CAHs have been visited and six to ten more will be visited during this grant period. Rural opportunities have been presented and partner feedback has been documented. In addition to formal site visits, contact with all CAHs via phone and meetings takes place on a regular basis.	IRHA is represented on AHECs board along with ISDH. IRHA has a membership on the Rural Health Council that is overseen by the Office of Community & Rural Affairs state economic development agency. Health, economics and workforce development opportunities converge among these agencies and partners. The FLEX Advisory Committee meets throughout the year to educate its members on relevant rural health topics.

Goals	Objectives	Products/ Services/ Activities	2011 Progress and Process Measures	Qualitative Impact/Result
	Support IRHA in the development of its rural health clinic network.	Attends meetings, participates in research or other duties as assigned	SORH attended IRHA network meetings during the grant period.	The 2011 Spring Into Quality Symposium for Rural Health Care Providers will take place March 3, 2011. Continuing education credits will be offered for this program. The goal of the symposium is to heighten the awareness of Indiana health care quality initiatives and provide an update on national and statewide quality efforts. The symposium will be beneficial to both Critical Access Hospitals and Rural Health Clinics. Two separate tracks are being offered during the breakout sessions. The non-clinical track will include presentations on patient access, charge integrity, and patient financial services. The clinical track will focus on the Medicare Beneficiary Quality Improvement Project (MBQIP) National kickoff.
	Support SORHs ability to have readily available information pertinent to medically underserved areas	Geographic Information System (GIS) exploratory assessment for determining medically underserved areas in Indiana	This is ongoing. Internal and external databases have been and will continue to be utilized for GIS assessment of health status and to determine areas of greatest need.	Gave rise to a larger project to analyze how and where to locate state and federally assisted rural and urban providers based on health indicators and medically/professionally underserved designations. Programs will be located in areas of greatest need.
		Health Education media campaign for a targeted intervention	Scott County Indiana has a high colon cancer morbidity and mortality rate. Scott County is a rural, medically underserved and health professional shortage area.	Working with the Indiana Cancer Consortium, Scott County Memorial Hospital, HealthCare Excel, and two rural health clinics, a patient navigation, quality improvement project, and health education campaign will be conducted.

Goals	Objectives	Products/ Services/ Activities	2011 Progress and Process Measures	Qualitative Impact/Result
	Directly support rural health clinics	IRHA staff will perform on site visits to all rural health clinics in Indiana Interviews of RHC staff will be performed and TA will be provided on site	Information will be utilized for educational opportunities and to determine best practices	IRHA completed visits of 65 RHCs
Provision of technical assistance	Provides contract management oversight to all partners receiving rural health funding through SORH, FLEX and SHIP. Is the fiscal agent for the HIT-CAH grant.	Communicate through emails, phone calls, and by sharing work products or templates that explain procedures or best practices.	Monthly meetings or conference calls occur with contractors and grantees to make sure HRSA grant benchmarks are being met and ISDH contract policy is being followed.	Partners are finding it easier to implement deliverable based contracts which drive publication of return on investment for SORH. PCO staff provides project planning, contracting, and claiming guidance to CAHs. PCO staff provides assistance with J-1, NIW waivers and health shortage designations sought by rural individuals and entities.

Goals	Objectives	Products/ Services/ Activities	2011 Progress and Process Measures	Qualitative Impact/Result
	Support rural health partners as needed	Provide TA as needed and will research subject/topic when needed	Ongoing activity communication occurs via e-mail, face-to-face, and telephone	Partners receive information in a timely and useful manner. IRHA provides four quarterly workshops for CAHs each year. The four workshops provided to the CAHs were: • August 12, 2010 What is Telehealth Doing for you? Indiana Success Stories • August 13, 2010 Leadership Seminar • November 30 – December 1, 2010 HIT or Miss: Health Information Technology Summit • March 3, 2011 Spring into Quality Symposium

INDIANA UNIVERSITY SCHOOL OF MEDICINE,
DEPARTMENT OF FAMILY MEDICINE,
BOWEN RESEARCH CENTER

Evaluation of the Indiana Medicare Rural Hospital Flexibility Program

Prepared for the Indiana State Office of Rural Health

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Contents

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Executive Summary

Purpose and Use of the Evaluation

An evaluation of the Indiana Flex Program was conducted by the Indiana University School of Medicine, Department of Family Medicine, Bowen Research Center from June through August 2011. Approximately 25 program stakeholders from the Indiana State Department of Health, Office of Rural Health (SORH), the Indiana Rural Health Association's (IRHA), Health Care Excel (HCE), and Indiana Critical Access Hospitals (CAHs) participated in the evaluation.

The primary purpose of this evaluation was to document the progress and impact of the eight projects that comprised the Indiana Flex Program from September 1, 2010 through August 31, 2011. The results of this evaluation will be used by the SORH, IRHA, Indiana CAHs, and the Health Resources and Services Administration (HRSA) to guide future efforts of the Flex Program and improve the health outcomes of rural residents in Indiana.

The objectives of this evaluation were as follows:

- Determine consistency of program goals and linkage to the HRSA Core Areas
- Identify stakeholder involvement in the development and implementation of the Flex Program project initiatives
- Measure CAH stakeholder satisfaction with the individual project activities and outputs
- Identify program and project level strengths and weaknesses
- Make recommendations for ongoing program and project development, improvement, and evaluation.

Evaluation Methods

The methods used to conduct this evaluation involved two branches of examination; a review of secondary data provided by the Indiana Flex Program staff and primary data collected by the external evaluation team. The secondary data included project progress

reports, administrative documents, emails, survey instruments and results, and Flex Scorecard. The primary data collected by the evaluation team included interviews with key Indiana Flex Program staff members including the Flex Program coordinator, the SORH director, Indiana Flex Program project managers, CAH staff, and CAH CEOs.

Findings

The vision of the Indiana Flex Program was to ensure continued movement toward an integrated system of rural health care by allocating Flex funds through project-based initiatives. The goals of the Indiana Flex Program were designed with input from the chief executive officers (CEOs) from each of Indiana's 35 CAHs and were supported by five strategic areas. Each strategic area included projects that aligned with each HRSA core area as appropriate. The Indiana Flex Program strategic areas, HRSA core areas, and aligned projects and are as follows:

Strategy I: Statewide CAH Benchmarking Program

HRSA Core Area 1: Support for Quality Improvement in CAHs
Indiana Flex Projects: The Multi-CAH Benchmarking and the Statewide Secure Portal projects

Strategy II: Statewide Quality Initiatives

HRSA Core Area 1: Support for Quality Improvement in CAHs
Indiana Flex Projects: The CAH Quality Readmissions, the Telestroke Network, and the Medicare Beneficiary Quality Improvement Projects (MBQIP)

Strategy III: CAH Quality Educational Programs

HRSA Core Area 2: Support for Operational and Financial Improvements in CAHs
Indiana Flex Projects: The CAH Educational Programs

HRSA Core Area 3: Support for Health System Development and Community Engagement, including integrating EMS in regional & local systems of care
Indiana Flex Projects: The Pulaski Memorial Hospital Baby-Friendly Certification Project

Strategy IV: Video conferencing/e-Learning Program

HRSA Core Area 3: Support for Health System Development and Community Engagement, including integrating EMS in regional & local systems of care

Indiana Flex Projects: Video Conferencing/ e-Learning

Strategy V: Facilitate CAH Conversion of Small Rural Hospitals to CAH Status

HRSA Core Area 4: Designation of CAHs in the State

Indiana Flex Project: The CAH Conversion Project

Since the Indiana Flex Program is project-based rather than site-based, the findings from the evaluation are summarized by each strategic area and aligned projects.

Strategy I: Statewide CAH Benchmarking Program

During this evaluation period, the Statewide CAH Benchmarking Program was initially focused on creating a secure portal and data repository within the ISDH network, and offering direction to CAHs on the importance of publicly reporting data to *Hospital Compare*. However, activities related to the ISDH network secure portal and repository were suspended when the Medicare Beneficiary Quality Improvement Program (MBQIP) was initiated by the Office of Rural Health Policy (ORHP) in 2010, as it was viewed to be redundant activities. The SORH continued its efforts to encourage CAHs to report performance measures to *Hospital Compare*.

It is anticipated that the MBQIP will improve patient care and operations by identifying best practices and streamlining CAH clinical and financial data collection and warehousing. Therefore, development and implementation of a state level secure portal and data repository is considered to be an ongoing initiative that ultimately may be replaced by the MBQIP. Future funding for the development of the secure portal and data repository may be used for implementation of the MBQIP and/or future data collection efforts.

Strategy II: Statewide Quality Initiatives

The Flex Advisory Committee selected two quality improvement projects for implementation in 2010-2011 that focused on enhancing performance and expanding access to care. These projects were designed to reduce readmission rates of CAHs and to continue development and expansion of the telemedicine network. In the later part of fiscal year

2010-2011, the ORHP added the MBQIP to the Flex Program under HRSA Core Area 1.

The CAH Readmissions Project

The CAH Readmissions Project was designed to reduce avoidable hospital readmissions through quality improvement activities that were specifically related to discharge processes. Project activities involved selecting a Quality Improvement Organization (QIO) partner to implement evidence-based practice protocols for reducing unnecessary hospital readmissions for identified diagnosis of congestive heart failure (CHF) and pneumonia (PN). Health Care Excel (HCE) was selected as the QIO and all activities were managed by the project coordinator who was employed by HCE.

The SORH Director, Flex coordinator and CAH Readmissions project coordinator selected the Care Transition Model of Quality Improvement to guide year one activities of the project, and seven CAHs were recruited for participation in the project. Although participating CAHs reported the required data throughout the evaluation period, it is too early in the project to draw conclusions about the effectiveness of the intervention. Meaningful improvements in CAH readmissions and patient outcomes are expected to be detected in program years two through five.

It is recommended that alternate data sources be used to establish benchmarks for CHF and PN readmission rates. The current baseline data collected in March 2011 was only for one month and was limited to participating CAHs. Although this measure was adequate for establishing a baseline for post-intervention comparison, it may not be a desirable benchmark for readmission rates. The CAH Readmissions Project team may also consider reporting CHF and PN measures separately to isolate any difference in readmission rates, costs, average length of stay, and bed utilization between the two conditions. It may also prove beneficial to track the data by hospital in the Flex Scorecard, in addition to aggregating, to detect any differences between hospitals. This level of insight may help focus educational and technical assistance activities at the CAH level.

The Telestroke Network Project

The Telestroke Network Project involved a collaboration between the IRHA, the Indiana

State Rural Health Network (InSRHN), the American Heart Association (AHA), HCE, and the SORH to develop a statewide network capable of delivering acute stroke care and state of the art therapies to rural Indiana residents.

The Telestroke Network Project involved two phases of implementation. The first phase, which was termed the technical component, involved conducting readiness assessments for project implementation activities at participating CAHs. The second phase, which was considered to be the clinical component, involved implementing the AHA's Get With The Guidelines®-Stroke Care Program (GWTG-Stroke Program). The focus of the clinical component was to obtain baseline stroke care data and implement evidence-based practice guidelines through the GWTG-Stroke program.

Activities during the technical component phase of the project focused on establishing the infrastructure needed to execute stroke consultation services for participating CAHs. Seven Indiana CAHs requested participation in the technical component project; however, two of the CAHs that were recruited at the beginning of the project were eventually replaced by two new CAHs. The clinical component activities involved recruiting CAHs for participation, establishing project expectations, and training clinicians and staff on the GWTG-Stroke Program protocols and the *Outcomes, Inc.* patient management tool (PMT). Eight CAHs requested participation in the project and began collecting baseline data on performance measures and entering that information into the PMT. Although process and performance measures were tracked throughout the fiscal year, health outcomes data were not collected, because these measures had not been identified.

During the fiscal year, an informal survey was conducted with the CAH CEOs to identify additional Telehealth needs in an attempt to expand Telehealth services (i.e. Telecardiology, Telemental Health, etc.) statewide on an annual basis. The results of this survey revealed a low level of interest in expanding Teleheath services and identified LEAN management initiatives as a preferred option for use of Flex funds for quality improvement projects. Therefore, the IRHA and SORH decided to postpone expanding the reach of the Telestroke network to additional Indiana CAHs for years two through five of the program in favor of developing LEAN management initiatives.

Although the project will not be expanded to additional Indiana CAHs, evaluators did note some recommendations for the IRHA and the CAHs that plan to continue participating in the Telestroke Network Project. The IRHA project coordinators may consider convening an advisory group with members of each participating CAH to develop proxies for patient health outcomes.

The Medicare Beneficiary Quality Improvement Project (MBQIP)

The Office of Rural Health Policy (ORHP) added the MBQIP to the Flex Program under HRSA Core Area 1 in 2010. Participation in MBQIP is voluntary; however, it may soon be used to compare CAH performance to other rural and urban hospitals. It is also anticipated that the MBQIP will prepare CAHs to meet future national reporting requirements. The primary goal of the MBQIP is for CAHs to implement quality improvement initiatives that improve operations and patient care.[1]

The MBQIP objectives were organized in phases over a three year period. Only Phase 1 and Phase two activities and measures were included in this evaluation. The objectives for Phase 1 and Phase 2 were as follows:

- Increase CAH *Hospital Compare* participation for Phase 1measures ((Pneumonia (PN) and Congestive Heart Failure (CN)) to 100 percent by Flex FY2012 to improve publicly available data and motivate CAHs to implement related quality improvement initiatives
- Achieve CAH *Hospital Compare* participation for Phase 2 measures (Outpatient and HCAHPS) and non-*Hospital Compare* Phase 3 measures (Pharmacy Review of Orders and Outpatient Emergency Department Transfer Communication) to 100 percent by Flex FY2013 to motivate CAHs to implement quality improvement initiatives

Ninety-one percent of Indiana CAHs voluntarily reported at least one MBQIP measure to *Hospital Compare* during this evaluation period. Barriers to participation in *Hospital Compare*

[1] National Rural Health Resource Center. (May 5, 2011). *FLEX Medicare Beneficiary Quality Improvement Project (MBQIP).* Retrieved from http://www.ruralcenter.org/sites/default/files/MBQIP%20Overview%20for%20Flex%20Coordinators%20Final_05112011.pdf

included lack of abstraction resources, lack of incentive for CAHs to report, and the small numbers of patients admitted for CHF and PN.

Recommendations for the continuation of the MBQIPs include assisting CAHs in data abstraction methods. This includes offering educational sessions through the CAH Quality Education Program on the process of data abstraction, data entry, and reporting. A data quality protocol that IRHA may use to check the accuracy of CAH data may also be beneficial.

Strategy III: CAH Quality Educational Programs

Strategy III consists of the CAH Educational Programs and the Pulaski Memorial Hospital Baby Friendly Certification Project.

The CAH Quality Educational Programs

The goal of CAH Educational Programs was to offer CAH staff the opportunity to network and share best practices with their peers, as well as provide educational programs on improving CAH performance. During this evaluation period, the CAH Educational Programs delivered three programs focused on quality, leadership and health information technology (HIT). The programs included the *HIT or Miss Summit*, *Spring into Quality Symposium,* and the *Leadership Seminar*. In addition to the educational programs, the IRHA distributed a quarterly newsletter called *"CAHoots"* and provided technical assistance to all Indiana CAHs.

Program participants were surveyed at each session on the amount of knowledge gained and the potential for change in organizational activities as a result of attending the program. The survey results reported in this evaluation were gathered from the project coordinators final report of CAH Educational Programs.

HIT or Miss Summit: The intended outcomes of the *HIT or Miss Summit* were to improve the knowledge base of CAH stakeholders and CAH personnel concerning meaningful use and health information technology (HIT).One hundred percent of the survey respondents anticipated being able to apply the strategies and information learned at the summit to improve their work.

Spring into Quality Symposium: The intended outcomes of the *Spring into Quality Symposium* were as follows:

- Improve the knowledge base of CAH stakeholders and CAH personnel in order to improve emergency department services
- Increase knowledge of and participation in the Medicare Beneficiary Quality Improvement Project (MBQIP)
- Improve hospital financial performance regarding admission/registration, charge integrity, and patient financial services.[2]

Ninety-five percent of the survey respondents reported the material presented in the session concerning emergency department services was relevant and valuable. Eighty-nine percent of the survey respondents indicated the material presented during the MBQIP session was relevant and valuable.[3] Eighty five percent of survey respondent reported the material covered in "The Uninsured Connection Challenge" presentation was relevant and valuable. Eighty-four percent of the participants of the charge integrity session reported the material was relevant and valuable. The patient financial services session offered valuable and relevant material to 75 percent of respondents.[4]

Leadership Seminar: The intended outcomes of the Leadership seminar were to improve the knowledge base of CAH stakeholders and CAH personnel on leadership issues in order to improve hospital services.[5] Ninety-eight percent of survey respondents reported that Joe Tye's "Building a Culture of Ownership on a Foundation of Values" presentation was relevant and valuable, 77 percent found Billy Marlow and Joanie Perkins' "The Little Hospital That Could" presentation relevant and valuable, and 59 percent of reported that the James Krile's "Three Leadership Tools for Community Engagement" presentation was relevant and valuable to them.[6] However, 11 percent of the respondents reported dissatisfaction with the value and relevance of the "Three

[2] Carlson, L. (2011). IRHA CAH Educational Programs: Flex Program Work Plan.
[3] Carlson, L. (2011, Aug. 31). IRHA CAH Educational Programs Flex Program Coordinator Final Report.
[4] Carlson, L. (2011, Aug. 31). IRHA CAH Educational Programs Flex Program Coordinator Final Report.
[5] Carlson, L. (2011). IRHA CAH Educational Programs.
[6] Carlson, L. (2011, Aug. 31). IRHA CAH Educational Programs Flex Program Coordinator Final Report.

Leadership Tools for Community Engagement" presentation. Normally, if 10 percent or more of respondents indicate that the information provided was not relevant or valuable, then this may be considered an area for improvement.

Program year one evaluation activities demonstrate that, overall, attendees were satisfied with the educational programs and wish to have more offered in the future.

The Pulaski Memorial Hospital Baby-Friendly Certification Project

The Pulaski Memorial Hospital (PMH) Baby-Friendly Certification Project is an effort to promote the importance of breastfeeding and increase the initiation and duration of breastfeeding in the Pulaski community. The project's objective was to attain baby-friendly designation through the Baby-Friendly Hospital Initiative (BFHI).[7] As a result of joining this global movement to support healthy mother and child outcomes and relationships, PMH will be the first Indiana CAH to be recognized as part of the BFHI, thus influencing other Indiana CAHs to practice "Baby-Friendly" techniques.[8] The Baby-Friendly designation supports the overall goal of the Indiana Flex Program to improve health care in rural communities. The Flex Program awarded PMH a one-time funding opportunity to support its mission of becoming a Baby-Friendly designated hospital.

The project activities during this evaluation period included applying for the dissemination phase, developing a staff education plan, purchasing educational materials for staff, sending staff to breast feeding in-service education, continuing and completing Baby-Friendly education, purchasing an International Lactation Consultant Association membership for the lactation consultant, and paying for additional training. The project coordinator indicated that the completion of the 4-D pathway is ongoing. However, recommendations for future improvement may not be warranted as Flex funding will not continue into the next funding cycle. However, the final report should be updated to include the outcomes of all proposed activities from the project Attachment A.

[7] Indiana Rural Health Association. (2011). Pulaski Memorial Hospital Baby Friendly Hospital Attachment A.
[8] Berry, S. (2011, Aug. 12). *Baby-Friendly Hospital Initiative Pulaski Memorial Hospital* [PowerPoint slides].

Strategy IV: Video Conferencing/e-Learning Project

A survey of CAHs conducted by the IRHA in April 2010 revealed that only 33 percent of Indiana CAHs used any form of video conferencing equipment.[9] In an effort to increase connectivity between Indiana CAHs, the IRHA created the Video Conferencing/e-Learning project with Flex Program funds. The goal of the project was to increase connectivity between CAHs for the purposes of improving communication, education, strengthening relationships, reducing CAH travel costs, and increasing meeting participation.

The project activities during the initial phase focused on establishing the infrastructure needed to deliver the video conference and e-Learning services. The IRHA purchased the equipment needed to establish video conferencing technology between the IRHA and participating CAHs. The IRHA then partnered with the Indiana Statewide Rural Health Network (InSRHN) to pilot the video conferencing solution with six InSRHN CAHs. During the first quarter of 2011, the IRHA made arrangements with the six pilot locations to host other hospitals within an hour and a half of their locations.[10] This gave all 24 of the InSRHN CAH member staff the opportunity to attend IRHA and InSRHN meetings either at their own location or at a CAH site much closer to home.

The project resulted in reduced travel costs for and increased meeting participation of CAH staff members. In addition, the project coordinator estimated that meeting participants have saved as much as six hours of productivity per meeting by conducting meetings via video conference. The infrastructure and project management activities completed in program year one established the foundation for expanding the video conferencing network and additional services during program years two through five. It is anticipated that the project will be expanded statewide to include all remaining Indiana CAHs that wish to participate.

Key informant interviews revealed some opportunities for improvement. In order to increase the overall satisfaction with the project, it is recommended that the process for scheduling meetings be revised to reduce the labor burden on host sites. Training on how the process for scheduling meetings also should be provided to the site administrators.

[9] Sanders, B. (2011, Aug.). Videoconferencing and e-Learning Flex Program Coordinator Final Report.
[10] Sanders, B. (2011, Mar. 12) FLEX Videoconferencing E-Learning RFP and continuance request for September 2011-August 2012.

Strategy V: Facilitate Conversion of Small Rural Hospitals to CAH Status

The Indiana State Office of Rural Health (SORH) and Flex coordinator provide the resources and technical assistance to small rural Indiana hospitals that wish to seek CAH status. During this reporting period, there were not any Indiana hospitals that sought assistance for conversion to CAH status.[11]

Program Commendations and Recommendations

The State Office of Rural Health (SORH) and the Indiana Rural Health Association (IRHA) should be commended for developing a strategy for its Flex Program that clearly links each project and related objectives to the HRSA core areas. Both organizations also should be recognized for the following achievements:

- Increasing satisfaction among CAH CEOs regarding improved communication between the SORH and the IRHA, which resulted in the delivery of consistent messages regarding the Flex Program
- Leveraging the InSRHN network as a platform for piloting Flex Program projects, specifically the Telestroke Network Project and Video Conferencing/e-Learning Project.
- Increasing professional competency regarding stroke care at participating CAHs
- Increased professional competency and improved processes for reducing congestive heart failure and pneumonia readmissions at participating CAHs.
- Increased technologic capacity at participating CAHs.
- Placing a high value on conducting on-going evaluation activities. This led to swift changes in project activities that are anticipated to have an increased, positive effect on Indiana CAHs and rural Indiana residents.
- Improving communication and strengthening relationships between CAHs through project-based activities.

Programmatic Recommendations

Although the SORH and IRHA established five strategic areas for improving quality of care, access to care, and financial stability for Indiana CAHs, a comprehensive strategic plan that

[11] IRHA (2011). *CAH Conversion*.

links the rural health needs identified in the Indiana Rural Health Plan (IRHP) to goals and SMART (specific, measurable, achievable, realistic, and time-bound) objectives is needed[12]. Currently, the connection between the rural health needs described in the IRHP and the five strategic areas outlined in the 2011 grant application is not clearly defined. Therefore, it is recommended that the SORH and IRHA develop a 3-5 year strategic plan that links the Indiana Flex Program activities to the needs identified in the IRHP, national Flex Program goals, and HRSA core areas.

The CAH CEO interviews revealed that since the shift from a site-based to a project-based process for allocating funds, some CAHs are not able to benefit fully from the Flex Program. The project-based approach also has led to a slight perception among CAHs that the IRHA may be benefiting more from the project-based approach than the individual CAHs. Therefore, it is recommended that during the strategic planning process, the SORH, IRHA, and other program stake holders consider opportunities for CAHs that are not able to participate in current Flex Program projects to receive Flex Program funds. The IRHA also may consider including a communication plan with the strategic plan that conveys the added value it brings to the Flex Program.

Each Indiana Flex Program project clearly defined appropriate and useful process measures; however, there was a notable lack of health outcome measures. It is recommended that the SORH director and IRHA Flex Program coordinator collaborate with the Technical Assistance and Services Center (TASC) or other qualified organization to conduct training with Indiana CAH clinicians and project coordinators on identifying health outcome measures related to each project.

Key informant interviews with representatives from CAHs participating in the CAH Readmissions Project and Telestroke Network Project emphasized the need to reduce the number of data collection tools they are currently using. Although all agreed that collecting relevant measures is beneficial, entering the same data multiple times can be a burden on limited resources. Therefore, it is recommended that the Flex Program continue its secure

[12] Department of Health and Human Services. (2001, May 2). Framework for Program Evaluation in Public Health. Retrieved from http://www.cdc.gov/mmwr/preview/mmwrhtml/rr4811a1.htm

portal and MBQIP activities, while being mindful of the need to reduce the amount of time CAHs currently spend on data entry.

Evaluation Recommendations

The Indiana Flex Program should continue its internal evaluation efforts. However, it is recommended that a comprehensive evaluation plan be developed that clearly defines the methods for measuring the progress toward and outcomes of the goals, objectives, activities, and impact measures laid out in the 3-5 year strategic plan. Data collection methods and proposed analysis plan should be included in the evaluation plan as well. Project impact should be assessed by identifying short-term, intermediate-term, and long-term measures. In order to further improve on-going evaluation activities, training key project team members on the importance and value of evaluation data, as well as data collection and evaluation methods should be included in project work plans.

Section 1- Introduction

This evaluation report consists of nine sections. This section of the report provides an overview of the Medicare Rural Hospital Flexibility Program (hereafter referred to as the Flex Program), rural health in Indiana, the administration of the Flex Program in Indiana, program funding and allocations, and a brief description of the Indiana Flex Program goals and project activities. Sections two and three describe the purpose and methods of the evaluation. Sections four through eight are dedicated to each Indiana Flex Program project. The remaining three sections describe the Indiana State Rural Health Plan, Indiana rural health strategic planning, and commendations and recommendations. Information included in this section was obtained from resources on the Internet; Indiana Flex Program staff and other program stakeholder interviews; program documentation; the Health Resources and Services Administration; Office of Rural Health Policy website; Rural Health Resource Center (TASC); and the Flex Program Monitoring Team Website.

1.1 Medicare Rural Hospital Flexibility Program Overview

The Flex Program was established by the Balanced Budget Act of 1997, Public Law 105-33 and was reauthorized by Section 121 of the Medicare Improvements for Patients and Providers Act of 2008, Public Law 110-275 to: provide federal funding to states to enhance quality and performance improvement activities; stabilize rural hospital budgets; improve access to preventive services; and integrate emergency health care services (EMS) into local health care delivery system. The Rural Health Division of the Health Resources and Services Administration (HRSA), at the U.S. Department of Health and Human Services (DHHS), administers the Flex Program in states with Critical Access Hospitals (CAHs) or potential CAHs. Collaboration among CAHs, EMS providers, clinics and providers is encouraged to increase efficiencies and quality of care in rural communities[13].

The Flex Program provides funds to 45 states including Indiana, and is comprised of two major components: issuing federal grants to states to assist them with implementing state specific program activities that advance the goals of the national Flex Program, and a CAH-

[13] United States Department of Health and Human Services, Health Resources and Services Administration (2010). Information retrieved https://grants.hrsa.gov/webExternal/FundingOppDetails.asp?FundingCycleId=0669E55B-92E6-4012-8245-3500748731E3&ViewMode=EU&GoBack=&PrintMode=&OnlineAvailabilityFlag=&pageNumber=&version=&NC=&Popup=.

based operating program, which provides cost-based Medicare reimbursement for hospitals that convert to CAH status. The DHHS, HRSA, and Office of Rural Health Policy (ORHP) administer the national grant program. The Centers for Medicare and Medicaid Services (CMS), a branch of DHHS, administers the CAH-based operating program. Legislative authority for the Flex Program and cost-based reimbursement for CAHs are described in the Social Security Act, Title XVIII, Sections 1814 and 1820, available at http://www.ssa.gov/OP_Home/ssact/title18/1800.htm.

The Health Resources and Services Administration (HRSA) has established requirements in four core areas to which states receiving Flex Program funds must adhere[14]. These HRSA core areas are:

1. Support for Quality Improvement in CAHs
2. Support for Operational and Financial Improvement in CAHs
3. Support for Health System Development and Community Engagement, including integrating EMS in regional and local systems of care
4. Designation and supporting CAH.

The Flex Program also requires states to develop a CMS-approved state rural health plan, and conduct planning for improving rural health networks.

1.2 Rural Health of Indiana

More than half (60%) of Indiana counties are located in rural or non-metropolitan areas, and almost 50 percent (47.3%) of the rural counties are partially or completely medically underserved or have shortages of health professionals. Therefore, Flex Program funds are a critical component to improving access and quality of health care to Indiana's rural residents[15].

[14]United States Department of Health and Human Services, Health Resources and Services Administration (2011). Information retrieved from http://www.hrsa.gov/ruralhealth/about/hospitalstate/medicareflexibility_.html.
[15] Indiana State Department of Health, *2009-2010 Indiana Annual Flex Program Evaluation* (2010).

As of March 2001, there were 35 CAHs in Indiana. Indiana has the 10th highest number of CAHs of all participating Flex Program states (http://www.flexmonitoring.org/cahlistRA.cgi). The average number of CAHs among the 45 states that receive Flex Program funds is approximately 29. Each Indiana CAH provides excellent care in the community and adjoining areas it serves; however, integrated systems of care are needed to ensure essential services such as hospital and physician services, behavioral health, dental care, and EMS are accessible to residents of even the smallest communities[16].

1.3 Indiana Flex Program Summary

The Indiana Flex Program is dedicated to providing Indiana CAHs and other rural health providers with information, programs, and services that will improve access to care, quality of care, and financial stability. As a result of the Indiana Flex Program efforts, it is anticipated that rural communities and residents will experience improved health outcomes.

1.3.1 Program Vision

Over the five-year period (2010-2015), Indiana plans to use the Flex Program funds to ensure continued movement toward an integrated system of rural health care. Integrated systems of care are especially challenging in rural areas due to the lack of essential services. Therefore, the Indiana State Department of Health, Office of Rural Health (SORH) will support emerging technologies and models of cooperation that bring high quality, coordinated, and culturally-sensitive care to Indiana's rural populations, while supporting viable revenue streams for providers[17].

1.3.2 Program Goals for FY 2010-2011

The goals of the Indiana Flex Program were designed with input from the chief executive officers (CEOs) from each of Indiana's 35 CAHs to support the HRSA Flex Program four core areas. The goals for the Indiana Flex Program five-year period are included in **Table 1.1 Indiana Flex Program Goals**.

[16] Indiana State Department of Health, *2009-2010 Indiana Annual Flex Program Evaluation* (2010).
[17] Indiana State Department of Health, *2009-2010 Indiana Annual Flex Program Evaluation* (2010).

1.3.3 Implementation

The SORH collaborated with the Indiana Rural Health Association (IRHA) and other partners in implementing the Indiana Flex Program. The Indiana Hospital Association (IHA), Affiliated Service Providers of Indiana, Inc. (ASPIN), Indiana Area Health Education Centers (AHEC), Health Care Excel (HCE), the Indiana Quality Improvement Organization (QIO), and the American Heart Association (AHA) assisted the SORH and IRHA in providing leadership and expertise in implementing each project funded under the Flex Program. Each organization is vested in the success of the program through a common vision of enhancing the health and well-being of Indiana residents, specifically rural populations, through programming, advocacy, resources and leadership[18].

Table 1.1 Indiana Flex Program Goals by HRSA Core Area

HRSA Flex Program Core Area 1: Support for Quality Improvement in CAHs
Indiana Flex Program Goal 1
Develop a statewide data reporting and sharing system via a secure portal for data exchange.
Support CAHs in building upon a multi-hospital quality improvement project involving hospital readmissions targeting chronic diseases to increase patient safety and quality of care.
Increase access to care for specialty and subspecialty services through telehealth initiatives.
HRSA Flex Program Core Area 2: Support for Operational and Financial Improvements in CAHs
Indiana Flex Program Goal 2
Support CAHs with planning and implementing evidence-based strategies for improving financial performance.
HRSA Flex Program Core Area 3: Support for Health System Development and Community Engagement, including integrating EMS in regional & local systems of care
Indiana Flex Program Goal 3
Develop and expand use of electronic tools and e-Learning to enhance communication, training and education, and interaction among CAHs in Indiana to increase access to health care services by residents in Indiana.
HRSA Flex Program Core Area 4: Designation of CAHs in the State
Indiana Flex Program Goal 4
Facilitate conversion of small rural hospitals to CAH status in accordance with federal and state regulations as needs arise among Indiana rural hospital providers.

1.3.4 Indiana Flex Program Activities and Measures

The Indiana Flex Program goals were supported by five strategic areas. Each strategic area included projects, activities, and expected outcomes that aligned with each HRSA core area as appropriate. The SORH, IRHA and program partners delivered Flex Program funds,

[18] Indiana State Department of Health, *2009-2010 Indiana Annual Flex Program Evaluation* (2010).

through eight separate projects, to 35 Indiana CAHs during fiscal year 2010-2011. The Indiana Flex Program strategies and related projects are outlined in **Table 1.2 Indiana Flex Program Strategies and Aligned Projects**. Complete details regarding the specific activities, outputs, and outcomes related to each strategic area and aligned projects are provided in the section of this report dedicated to that strategic component.

Table 1.2 Indiana Flex Program Strategies and Aligned Projects

Strategy I: Statewide CAH Benchmarking Program			
Indiana Flex Program Project	**Description**	**Indiana Flex Program Goal**	**HRSA Core Area**
Multi-CAH Benchmarking	Statewide quality initiative to facilitate CAH reporting to CMS *Hospital Compare*	1	1
Statewide Secure Portal	Development and implementation of a web-based, data reporting tool for statewide reporting and benchmarking	1	1
Strategy II: Statewide Quality Initiatives			
Indiana Flex Program Project	**Description**	**Indiana Flex Program Goal**	**HRSA Core Area**
CAH Quality Readmissions	Statewide initiative focused on CAH readmissions	1	1
Telestroke Network Technical & Clinical Components	Statewide initiative focused on the development of a telemedicine network for Telestroke. Statewide initiative focused on implementation of evidence-based practice guidelines for stroke care	1	1
Medicare Beneficiary Quality Improvement Project (MBQIP)	Statewide quality initiative to facilitate CAH reporting to *Hospital Compare*	1	1
Strategy III: CAH Quality Educational Programs			
Indiana Flex Program Project	**Description**	**Indiana Flex Program Goal**	**HRSA Core Area**
CAH Educational Programs	Educational program development for CAHs	2	2
PMH Baby- Friendly Certification Project	Baby-Friendly Designation of Pulaski Memorial Hospital	N/A	3
Strategy IV: Video conferencing/e-Learning Program			
Indiana Flex Program Project	**Description**	**Indiana Flex Program Goal**	**HRSA Core Area**
Video Conferencing/ e-Learning	Development of a statewide video conferencing/e-Learning network (includes EMS training)	3	3

Strategy V: Facilitate CAH Conversion of Small Rural Hospitals to CAH Status			
Indiana Flex Program Project	**Description**	**Indiana Flex Program Goal**	**HRSA Core Area**
CAH Conversion Project	Provision of technical assistance and support of CAH conversion activities.	4	4

As previously mentioned, states receiving Flex Program funds are required to develop a CMS-approved state rural health plan and conduct planning for improving rural health networks. The details of the Indiana State Rural Health Plan and the Rural Health Network Strategic Planning activities are covered in separate sections of this report and are provided for informational purposes and program level recommendations only. This evaluation did not include a thorough examination of activities, outputs, and outcomes related to these efforts.

1.3.5 Funding Allocation

The Indiana Flex Program budget for year one (2010-2011) was $575,000.00. A complete financial analysis of program spending was not included in this evaluation. However, a summary of the original designation of funds outlined in the grant application compared to the final allocation of funds by the end of program year one is provided. A summary of the initial funding allocation by budget category is included in **Table 1.3 Indiana Flex Program Funding Allocation for Program Year One**. Funds for the Medicare Beneficiary Quality Improvement Project (MBQIP) and the Pulaski Memorial Hospital (PMH) Baby-Friendly Certification Project are not included in the Contractual Annual Subtotal, as these projects were not implemented until after the Flex Program grant was awarded.

Table 1.3 Indiana Flex Program Initial Funding Allocation for Program Year One

Budget Category	Purpose	Funding Amount
A. Personnel Subtotal	N/A	
B. Fringe Benefits & Taxes Annual Subtotal	N/A	
C. Travel Annual Subtotal		6,000
	In-State Travel/Local Travel	2,000
	Required Out-of-State Travel	4,000
D. Equipment Annual Subtotal	N/A	
E. Supplies Annual Subtotal	N/A	

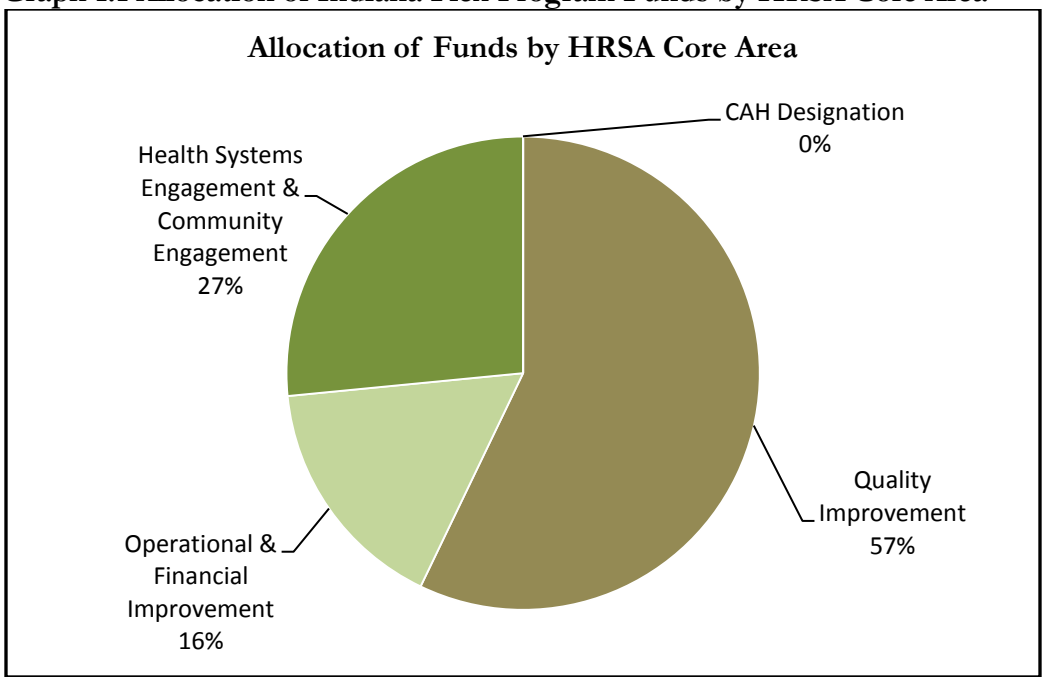
F. Contractual Annual Subtotal		568,082
	Flex Coordinator @ 1 FTE	51,000
	CAH Benchmarking/ Statewide Secure Portal	20,000
	CAH Readmissions	130,000
	Telestroke Network	130,000
	CAH Educational Programs	80,000
	Video Conferencing/e-Learning Program	127,082
	Program Evaluation	30,000
H. Other Annual Subtotal		0
I. Total Direct Charges		574,082
J. Indirect Charges		918
K. Total Grant Request		575,000

The MBQIP was allocated some of the funds originally intended for the CAH Benchmarking and Statewide Secure Portal projects. Excess funds from other projects were used to support the PMH Baby-Friendly Certification Project since it met the criteria for inclusion in the Flex Program. **Table 1.4 Indiana Flex Program Final Funding Allocation for Program Year One** describes the project funding allocations detailed in each project's Attachment A. In project year one, over half of the Flex Program funds received by Indiana were dedicated to quality improvement projects (refer to **Graph 1.1 Allocation of Indiana Flex Program Funds by HRSA Core Area**).

Table 1.4 Indiana Flex Program Final Funding Allocation for Program Year One

Indiana Flex Program Project	Funding Amount
CAH Benchmarking/ Statewide Secure Portal	15,000
CAH Readmissions	130,000
Telestroke Network	130,000
CAH Educational Programs	80,000
Video Conferencing/e-Learning Program	127,082
Medicare Beneficiary Quality Improvement Project (MBQIP)*	5,000
Pulaski Babies Friendly Project*	(3,000)

Graph 1.1 Allocation of Indiana Flex Program Funds by HRSA Core Area



Section 2 – Purpose of the Evaluation

The primary purpose of this evaluation was to document the State Office of Rural Health (SORH) and Indiana Rural Health Association's (IRHA) project activities, progress, and impact during fiscal year 2010-2011. The results of this evaluation will be used by SORH, IRHA, Indiana CAHs, and Health Resources and Services Administration (HRSA) to guide future efforts needed to improve the health outcomes of rural residents in Indiana.

The objectives of this evaluation were as follows:

- Determine consistency of program goals and linkage to the HRSA Core Areas
- Document the progress of the program activities and outputs related to each of the eight Indiana Flex Program projects
- Identify stakeholder involvement in the development and implementation of the Flex Program project initiatives
- Measure CAH stakeholder satisfaction with the individual project activities and outputs

- Identify program and project level strengths and weaknesses
- Make recommendations for ongoing program and project development, improvement, and evaluation.

This report presents the findings from a review of data for each of the eight 2010-2011 Indiana Flex Program projects.

Section 3 – Indiana Flex Program Evaluation Methods

The Indiana State Office of Rural Health (SORH) contracted with faculty and staff of the Indiana University School of Medicine, Department of Family Medicine, Bowen Research Center to conduct an independent evaluation of the Indiana Flex Program. The original evaluation plan submitted with the proposal was based on the 2010 Flex work plan. After the evaluators discussed projects with each project coordinator and reviewed available materials, the scope of the evaluation was modified in accordance with available data.

The methods used to conduct this evaluation involved two branches of examination: a review of existing program information and collection of primary data. The primary and secondary data sources were as follows:

Primary data:

- Interviews with key Indiana Flex Program staff members including the Flex coordinator, the SORH director, Flex project managers, CAH staff, and CAH CEOs.

The purpose of the primary data collection was to identity areas where outcomes and impact could be measured, and provide recommendations for improvement.

Secondary data:

- Indiana State Department of Health's 2010 Medicare Rural Hospital Flexibility Grant Application Package (included all attachments and project work plans)
- Mid-year and final Indiana Flex Program project status reports
- 2011 – 2012 Indiana Flex Program Evaluation Survey
- Indiana Flex Program team email correspondences
- Flex Scorecard

- *Outcomes, Inc.* reports
- 2009 – 2010 Indiana Annual Flex Program Evaluation
- 2009 - 2010 Indiana Rural Health Plan
- Indiana State Rural Health Network (InSRHN) documents

The project work plans and Flex project status reports were used to identify and track the expected activities, process, outcomes, and impact measures associated with each Flex project. The Scorecard was used to document the progress of key process measures associated with each project.

Section 4 – Strategy I: Statewide CAH Benchmarking Program

It is universally recognized that there is a need to collect and report data on Critical Access Hospital (CAH) performance. However, comparative indicators of CAH performance are difficult to find, because established measures do not accurately reflect CAH performance. Although the Centers for Medicare and Medicaid Services (CMS) has added and proposed new measures for conditions frequently treated at CAHs, other new measures include conditions that are rarely treated in CAHs. An additional barrier in accurately measuring CAH performance has been the lack of a central platform for data collection and storage. While *Hospital Compare* provides an adequate data repository for CMS core measures, it does not allow for capturing other relevant measures of performance specifically for CAHS or that come from different sources, such as financial indicators. Therefore, the Indiana Flex Program devised a strategy to research the data that is currently reported to *Hospital Compare* by Indiana CAHs, identify additional CAH performance measures, establish baseline measurements, and create a platform for combining disparate data sources into one secure repository stored on the Indiana State Department of Health (ISDH) network[19].

4.1 Evaluation Methods

Evaluators reviewed the program work plan to identify the target process and outcome measures. Evaluators also interviewed the Indiana State Office of Rural Health (SORH) director and the Flex Program coordinator via phone on July 20, 2011. The purpose of the interviews was to determine the progress and status of each of the program activities. The

[19] Indiana Flex Program Attachment 1: Work Plan (2011).

process measures included in this evaluation relied on the CAH Benchmarking Program work plan with adjustments based on the suspension of the ISDH secure portal and data repository initiative. Each activity was reviewed and categorized as "In Development", "Ongoing", and/or "Completed".

4.2 Funding Allocation

Funding for this project was included in the CAH Benchmarking Program line item of the federal Flex Program budget in the amount of $20,000.00. The most recent Attachment A available for review by the evaluation team, reported a $15,000.00 budget for the period of August 1, 2010-January 31, 2011.

4.3 Program Activities

During this evaluation period, the Statewide CAH Benchmarking Program was initially focused on creating a secure portal and data repository within the ISDH network, and offering direction to CAHs on the importance of publicly reporting data to *Hospital Compare*. The objectives of the activities included:

- Increase performance/quality improvement activities among Indiana CAHs
- Increase participation in public reporting initiatives, including participation in the CMS *Hospital Compare* website among Indiana CAHs
- Determine clinical, financial, operational baseline measurements for participating CAHs
- Increase the number of CAHs publicly reporting to the CMS *Hospital Compare* website and participating in public reporting initiatives
- Provide the SORH and Flex Program Coordinator access to current CAH performance data

However, activities related to the ISDH network secure portal and repository were suspended when the Medicare Beneficiary Quality Improvement Program (MBQIP) was initiated by the Office of Rural Health Policy (ORHP) in 2010, as it was viewed to be redundant activities. The SORH continued its efforts to encourage CAHs to report performance measures to *Hospital Compare*.

4.4 Process Measures

Internal evaluation efforts included collecting relevant process measures related to the program activities. The process measures included in this evaluation are described in **Table 4.1 Process Measures**.

Table 4.1 Process Measures

Objective: Development of a Statewide Multi-CAH Benchmarking Program for quality reporting and benchmarking initiatives.	
Activity: Create a ***secure portal*** within the Indiana State Department of Health (ISDH) Network.	
Data Collection Method: Flex Score, SORH director, Indiana Flex Program coordinator	
Indicator/Measures	**Status**
Completion of a secure portal /data repository within the ISDH network.	In Development
Clinical, operational and financial measures reported to Flex Coordinator via Scorecard by CAHs.	None at this time - In Development
Number of CAHs using the portal.	None at this time - In Development
Total number and percent of CAHs reporting quality/clinical data to the portal by specific measures.	None at this time - In Development
Total number and percent of CAHs reporting financial data to the portal by specific measure.	None at this time - In Development
Amount and type of assistance provided to CAHs. Number of statewide Flex related meetings provided Total number attending statewide meetings (Rural Partners RT/IFPAC) Total onsite visits/contacts/calls to CAHs by Flex coordinator Total number of educational offerings/conferences attended by Flex coordinator Number of TA scenarios provided to CAHs	Ongoing Six statewide meetings were conducted by the Flex coordinator from September 2010 to August 2011, including roundtables (2), National Rural Health Association Meeting (1), and Indiana Flex Advisory Council meetings (3). The Flex coordinator initiated 118 site visits, contacts and telephone calls to CAHs from September 2010 to August 2011. The Flex coordinator attended 28 educational offerings and conferences. The Flex coordinator provided 167 technical assistance services to Indiana CAHs.

4.5 Outcome Measure

It was anticipated that by the end of program year one, CAH baseline data would have been collected for the year to establish benchmarks to compare CAH quality/clinical and operational improvements over time. These data were reported in the Indiana State Office

of Rural Health (SORH), Centers for Medicare & Medicaid Services (CMS) Core Measures Benchmarking Report, January 31, 2011.

4.6 Conclusions

It is anticipated that the MBQIP will improve patient care and operations by identifying best practices and streamlining CAH clinical and financial data collection and warehousing. Therefore, development and implementation of a state level secure portal and data repository is considered to be an ongoing initiative that ultimately may be replaced by the MBQIP. Future funding for the development of the secure portal and data repository may be used for implementation of the MBQIP and/or future data collection efforts.

The SORH director and Flex Program coordinator conducted an internal evaluation of the CAH Benchmarking Program by tracking appropriate activities and process measures via the Flex Scorecard and internal administrative documents. The Flex Scorecard shows more than 300 meetings, roundtables, educational sessions, site visits and technical assistance contacts made by Flex Program staff, predominantly the Flex Program coordinator, between September 2010 and August 2011. Outcomes for each type of session were not tracked in the Flex Scorecard. The process measures were well documented in the Flex Scorecard and the activities carried out during this evaluation period supported the intended Health Resources and Services Administration (HRSA) core areas and Indiana Flex Program goals described in the Flex Program grant application. Funding for this project appears to have been allocated according to the project Attachment A components.

4.7 Commendations and Recommendations

The SORH director and Flex Program coordinator should be commended for including ongoing evaluation activities throughout the fiscal year. It is apparent the ongoing evaluation activities resulted in program changes that made the most effective use of Flex Program funds. Suspending activities related to the ISDH secure portal and data repository in favor of supporting MBQIP activities eliminated redundant project activities.

If the SORH director and Flex Program coordinator resume the ISDH secure portal and data repository activities, it is recommended that a key be developed for defining the type of meetings, site visits, telephone calls, contacts, and technical assistance activities that are

tracked in the Flex Scorecard. Documentation of notable outcomes associated with each of these contacts is also recommended. The Indiana Flex Program also may consider tracking certain process and outcome measures by CAH to identify areas where additional support is required. Maintaining current and accurate information on the status of federal grant money line items budgeted for the ISDH secure portal and data repository also is recommended for future evaluations.

Section 5 – Strategy II: Statewide Quality Initiatives

In August 2009, the Indiana State Office of Rural Health (SORH) surveyed the Flex Advisory Committee to identify potential quality improvement projects for fiscal year 2010-2011. Two projects that focused on improving performance and expanding access to care were identified. These projects were designed to reduce readmission rates to Critical Access Hospitals (CAHs) and to continue development and expansion of the telemedicine network. In the later part of fiscal year 2010-2011, the Office of Rural Health Policy (ORHP) added the Medicare Beneficiary Quality Improvement Project (MBQIP) to the Flex Program under HRSA Core Area 1: Support for Quality Improvement in CAHs. Specific requirements for participation, goals, objectives, and expected outcomes were developed for each quality improvement project, and are covered separately in this section of the report.

5.1 CAH Quality Readmissions Project

The CAH Quality Readmissions Project was designed to reduce avoidable hospital readmissions through quality improvement activities, specifically discharge processes. The causes of hospital readmissions in rural Indiana include patient compliance, health literacy, and lack of coordination and communication across information systems and between providers. Therefore, the project sought to assist CAHs in discerning the nature and extent of their individual readmissions, educate staff on protocols designed to reduce readmissions, and ultimately demonstrate improved service. The vision of the readmissions program was to reduce readmission rates for congestive heart failure (CHF) and pneumonia (PN) by improving discharge processes and integrating care among hospitals, emergency room physicians, home care agencies, skilled nursing facilities and primary care physicians in the community.

The SORH director and the Indiana Flex coordinator partnered with Health Care Excel (HCE), the Indiana Quality Improvement Organization (QIO), to implement the CAH Readmissions Project. The SORH Director, Flex coordinator and CAH Readmissions project coordinator selected the Care Transition Model of Quality Improvement to guide year one activities of the project. The Care Transition Model of Quality Improvement protocol, as listed in the CAH Quality Readmissions Project September 1, 2010 through August 31, 2011 mid-year report, focused on reducing avoidable CHF and PN readmissions through improvements in discharge processes. The protocol included the following components:

- Examination of the current state of readmissions and discharge processes
- Assessment and prioritization of improvement opportunities
- Development of an action plan of strategies to implement
- Examination of local health literacy issues
- Monitoring and evaluation of progress
- Assessment , review, and redesign of provider-specific policies and processes that include the following areas: patient and caregiver education and communications; medication reconciliation and safety; symptom management; discharge treatment plan and follow-up care; sharing and transfer of all vital patient information
- Partnership with providers across all settings to promote improved communication and coordination across settings
- Engagement of local major stakeholders and community representatives

5.1.1 Evaluation Methods

Evaluators examined secondary data by reviewing project documentation including the Flex Scorecard, Hospital Assessment Inventory Summary, monthly meeting records, the mid-year and final year reports, and monthly hospital readmissions data reports. All project documentation was provided by the CAH Readmissions project coordinator. Evaluators also collected qualitative data by interviewing the project coordinator and representatives from CAH hospital partners. Contact information was provided by the project coordinator for each of the CAHs that participated in the project.

Evaluators telephoned each hospital partner, explained that the Flex Program team had contracted with Indiana University School of Medicine, Department of Family Medicine, Bowen Research Center to conduct an evaluation of 2010-2011 Flex Program activities, which included the readmissions project, and requested time to talk with the each hospital partner about the program. Evaluators interviewed representatives from six of the seven participating hospitals. One hospital partner did not return two telephone calls and was not interviewed. On-site interviews were conducted with three of the CAHs and the remaining three were interviewed by telephone. Benefits of participation in the readmissions project, improvements in discharge processes associated with participation in the readmissions project, barriers to participation, opportunity to participate CAH educational sessions, ideas of topics for future educational sessions, ideas for training hospital partners involved at any level of the CAH Readmissions Project, networking opportunities with other CAH readmissions partners and suggestions for overall project improvement were discussed with each CAH partner.

5.1.2 Funding Allocation

The State Office of Rural Health (SORH) awarded Health Care Excel (HCE) Flex funding in the amount of $130,000.00 to carry out project activities included in the project Attachment A.

5.1.3 Project Activities

The overarching activity related to the CAH Readmission Project for year one was to partner with a QIO on reducing unnecessary hospital readmissions for identified diagnosis of CHF and PN, which included implementation of evidence-based practice protocols for common diagnoses. As a first step, the project coordinator recruited seven CAHs to participate in the project (Reference **Table 5.1 CAH Participation**). Memorandums of Understanding (MOUs) were signed by representatives of each CAH before implementation of any intervention activities. Intervention activities supported two project goals, which were documented in the March 2011 progress report.

Goal 1: Assess current processes and tools used by healthcare providers to increase the efficiency of transitional care planning of healthcare providers and between

healthcare settings.

Following recruitment, the project coordinator conducted site visits with each participating CAH to assess CHF and PN readmission rates and existing discharge processes using a comprehensive assessment tool developed by HCE. The project coordinator documented in the mid-year report the results of the assessment and planned course of action. **Table 5.2 Assessment of Readmission Rates and Discharge Processes** summarizes the areas of improvement and the recommended course of action for assisting CAHs in reducing avoidable readmissions as reported in the March 2011 progress report. The Flex coordinator and project coordinator made several of the technical assistance contacts to support project goals, hospital recruitment, and discharge process assessment.

Table 5.1 CAH Participation

CAH Name	City
Decatur County Memorial Hospital	Greensburg
St. Vincent Dunn Hospital	Bedford
Margaret Mary Community Hospital	Batesville
Putnam County Hospital	Greencastle
Rush Memorial Hospital	Rushville
Sullivan County Community Hospital	Sullivan
IU Health White Memorial Hospital	Monticello

Table 5.2 Assessment of Readmission Rates and Discharge Processes

Area of Improvement	Action
Lack of shift-to-shift communication of discharge plan and patient education needs	Work with nursing and case management departments to improve the efficiency and accuracy of transfer of information regarding patients' discharge and education needs between each shift, among departments, and to any post-acute caregivers
Inadequate medication reconciliation tools	Consistency in the medication reconciliation tools used among hospitals, SNFs, and other care providers will result in improved accuracy in the reconciliation process as patients transition from between care settings
Inconsistent discharge information	Receiving timely and comprehensive discharge information and patient compliance regarding discharge instructions and follow-up appointments can reduce the risk of readmission
Poor patient education/health literacy	Knowing and understanding the patient's ability to comprehend health information is vital to the patient's recovery
Lack of collaborative partnerships among providers	Developing collaborative and effective communication systems among hospitals, home health agencies, SNFs, and primary care physicians enhances the care planning process for each patient, leads to better patient outcomes, and improves quality of care among providers
Inability to share personal health information	The ability to share health data between and among healthcare providers is critical to providing high-quality, cost-effective, informed healthcare

Two additional resources were also developed by the project coordinator to assist CAHs in discharge process improvement and are planned for dissemination in program year two.

- "Tools for Performance Improvement for Hospitals": practical strategies, resources and best practices discharge processes
- "Intervention Packages and How-To-Guides for Hospitals": guide of specific evidence-based intervention models that have successfully reduced preventable hospital readmissions

Goal 2: Facilitate an open, sharing environment for the CAHs to freely discuss issues related to readmissions and to cooperatively devise possible solutions and interventions.

Project activities focused on increasing communication between CAHs in order to share best practices and generate ideas for reducing readmissions. Specific actions taken by the HCE staff were as follows:

- CAHs were encouraged to ask questions and share barriers in their discharge planning processes. HCE prepared meeting agendas, and recruited appropriate transition-of-care experts to present at the meetings.
- CAHs were encouraged to develop or utilize an established standardized form for hand-off communication. It was determined that a standardized form was beneficial in improving the continuity of patient care and reducing hospital readmissions, by providing smooth transfers of patients from setting to setting.
- Emphasis was placed on giving patients discharged with a diagnosis of CHF/PN instructions on the importance of seeing their primary care physician within 7 days of discharge. Importance was also placed on setting the follow-up appointment prior to discharge. A follow-up telephone call was made to the patient, by designated personnel, to determine the ability of the discharged patient to attend the scheduled appointment with their primary care provider, and to provide assistance, where able, to facilitate appointment attendance. The telephone call offering and inquiring about the follow-up visit with the primary care provider proved to improve patient compliance with follow-up appointments.

5.1.4 Process Measures

The process measures included in this evaluation focused on the project work plan included in the Flex Program grant application and the mid-year and year-end status reports. The process measures tracked by the project coordinator are included in **Table 5.3 Process Measures**.

Table 5.3 Process Measures

Objective: Support CAHs in implementing a quality/patient safety project focused on reducing avoidable readmissions through improvements in discharge processes	
Activity: Develop CAH Quality Project partnering with the QIO focusing on reducing unnecessary hospital readmissions in identified diagnosis **CHF and PN**	
Data Collection Methods: SORH director, Flex program coordinator, HCE program manager	
Indicator/Measure	**Status**
Total number (%) of CAHs participating in the statewide QI program for CAH readmissions	**Ongoing**: Executed a contract with Health Care Excel to implement Care Transition Protocol in seven CAHs
Number of educational/technical assistance offerings provided to CAHs	**Ongoing**: Fifty-one educational/ technical assistance offerings were provided by the Flex coordinator and CAH Readmission project manager • Outreach Meetings 8 • Recruitment Meeting 2 • On-site visits 12 • Assessments 7 • Assessment Review 5 • Goal and priority setting 5 • Best Practices (discharge processes) 4 • Best practices policies/procedures on CHF is charges/ order sets sent to CAHs 3 • Webinar/Conference calls 5

5.1.5 Outcome measures

The CAH Quality Readmissions project planned to collect baseline data on anticipated outcomes by the end of the fiscal year and use this data as baseline for future project year comparisons. However, only five months of data was collected during this period because the intervention activities did not begin until April 2011. The average number of CHF and PN readmissions in March 2011 from all participating CAHs was established as the baseline and recorded in the Flex Scorecard for April 2011. Subsequently, each participating CAH submitted a monthly report to the project coordinator that included the total number of

CHF and PN readmissions, the total cost of CHF and PN readmissions, average length of stay, and bed utilization for the previous month. The data was then aggregated by the project coordinator and recorded in the Flex Scorecard. The aggregated scorecard data is presented in **Table 5.4 Outcome Measures**.

Table 5.4 Outcome Measures

Objective: Support CAHs in implementing a quality/patient safety project focused on reducing avoidable readmissions through improvements in discharge processes	
Activity: Develop CAH Quality Project partnering with the QIO focusing on reducing unnecessary hospital readmissions in identified diagnosis for **congestive heart failure (CHF) and pneumonia (PN),** which includes implementation of evidence-based practice protocols for common diagnoses identified.	
Data Collection Methods: Flex Scorecard	
Indicator/Measure	**Status**

Number of CHF/PN readmissions (Prior to Intervention)	**Completed:** Benchmark reported in April = 9 CHF/PN readmissions
Average Number of CHF/Pneumonia Readmissions (Avg Monthly Rate Following Implementation Intervention	**Ongoing**: Avg monthly rate for April-July = 11
Average monthly rate of CHF/PN readmissions prior to intervention compared to rate following intervention (utilization reduction)	**Ongoing**: Avg utilization reduction for April – July = -2
Cost of CHF/PN readmissions (Prior to Intervention)	**Completed**: Benchmark reported in April = $168,260.40
Average cost of CHF/PN readmissions (Avg Monthly Rate Following Implementation Intervention)	**Ongoing**: Avg cost April – July = $124,790.15
Average Monthly Cost of CHF/PN readmissions prior to intervention compared to cost following intervention (utilization reduction)	**Ongoing**: Avg cost reduction was $43,470.25
Average Inpatient Length of Stay (ALOS) (Prior to Intervention)	**Completed:** Benchmark reported in April = 3.15
Average Inpatient Length of Stay (ALOS) (Avg Monthly Rate Following Implementation Intervention)	**Ongoing:** Avg ALOS April-July = 2.35
Average inpatient length of stay (ALOS) for HF/PN diagnosis prior to intervention compared to ALOS following intervention (utilization reduction)	**Ongoing**: Avg monthly ALOS reduction= 0.80
Bed Utilization (# of inpatient days) (Prior to Intervention)	**Completed:** Benchmark reported in April = 47
Bed Utilization (# of inpatient days) (Avg Monthly Rate Following Implementation Intervention)	**Ongoing:** Avg monthly bed utilization April – July = 43.5
Bed utilization (number of inpatient days) for HF/PN diagnosis prior to intervention compared to bed utilization following intervention	**Ongoing**: Avg monthly bed utilization reduction = 3.5

5.1.6 Qualitative Measures

Evaluators interviewed representatives from six of the seven participating hospitals. Each representative reported working in quality improvement or quality services departments.

Key informants were asked about their involvement in the monthly conference calls, opportunities to participate CAH educational sessions, the benefits of participating in the readmissions project, improvements in discharge processes associated with participation in the project, barriers to participation, , ideas for future educational sessions topics, ideas for training hospital partners involved at any level of the project, networking opportunities with other CAH partners, and suggestions for overall project improvement.

Summary of Key Informant Interviews

- All hospital partners interviewed indicated routine participation in the monthly calls. About one-third of those interviewed indicated the monthly conference calls were beneficial to them
- Hospital partners indicated that a benefit of participation was focused time on study and updates to discharge processes
    - One partner indicated that participation initiated hospital focus on PN readmissions, including a detailed study of the discharge process. A flow chart analysis showed their PN process was "fairly streamlined." This partner also reported that hospital staff discovered people who were technically homebound and qualified for free hospital follow-ups
    - A second partner stated that participation resulted in an enhancement of their hospital's overall discharge process – For example, "pharmacists now review prescriptions with patients before leaving the hospital"
    - A third partner said that participation not only benefitted their hospital by focusing effort on readmissions as a whole, but also expanded the patient satisfaction process by adding post discharge telephone calls to the follow-up procedures
    - A fourth partner echoed previous comments that participation helped their hospital focus efforts on a study of internal readmissions processes that resulted in the development of much stronger teams. Physicians now help with the review, updating and development of processes.
- Time to focus effort was the biggest barrier to participation and data reporting.
- When the partners were asked about participation in the educational sessions

offered by the Flex Program, almost all indicated participating in at least one session.

  - One partner indicated participating in the annual conference and the spring and fall sessions. This partner thought the sessions hosted good speakers and provided good networking opportunities
  - A second partner reported that the "Care Transitions" session was "awesome"
  - A third partner indicated participating in the Roundtable for Nursing Executives and enjoyed the rural health discussions, project updates, and conversations with other nurse executives.

- Ideas for future training included continued access to program materials, sessions on the importance of the "big picture" for readmissions, evidence-based practice for nursing, evidence-based practice for medicine, and focused training around the discharge assessment
- One partner indicated they were looking forward to having access to the "Tools for Performance Improvement for Hospitals" toolkit
- Two partners indicated networking with other partners to discuss discharge planning issues was helpful. Others identified "Jabbster Nurse Executive Forum and Flex Quality Networking Forum (FQNC)" as a good networking tool
- Almost all of the partners reported they were satisfied with the program, believed it was a practical, and useful
- Suggestions to improve the calls included a review of monthly data, project updates, best practices, "what works", and discussions around discharge protocols and processes
- Suggestions for program improvement included more site visits, physician education (maybe CME), and opportunities for teleconferencing.

5.1.7 Success Stories

A key component of this evaluation effort was to identify success stories from participating CAHs that illustrate the effectiveness of the project. The following success stories were extracted in their entirety from the CAH Quality Readmissions Final Report 2010-2011:

- Margaret Mary Hospital has been working on value stream analysis, adopting "LEAN" principles in their discharge processes, specifically related to CHF/PN patients
- Putnam County Hospital has begun to utilize their Cardiac Rehabilitation staff in telephonic follow-up with CHF/PN patients
- Rush County Memorial and IU HealthWhite Memorial Hospitals are actively working on improving their CHF/PN clinical pathways and admission and discharge order sets
- As a result of the initial assessment done by HCE, St. Vincent Dunn Hospital was able to identify and change a process involving patient Personal Health Records (PHR). St. Vincent Dunn staff discovered that while they thought their PHRs were being provided to patients upon discharge, there was actually a gap in the process and PHRs were sitting in a storeroom untouched
- Sullivan County Hospital, while continuing to report data for the last five months, has been unable to participate in the project due to 100% turnover in two of their key Patient Care coordinator positions. With key personnel now in place and ready to actively move forward on the project, Sullivan County Hospital is now developing a discharge packet for CHF/PN patients.

5.1.8 Conclusions

Although participating CAHs have been reporting the required data, it is too early in the project to draw conclusions about the effectiveness of the intervention. The average number of CHF and PN readmissions reported for the months following the intervention increased by two; however, the average cost associated with the readmissions decreased by almost $45,000.00. Evaluators attempted to determine potential causes for the inverse relationship between the number of readmissions and costs; however a determining factor could not be linked to a specific intervention activity. Meaningful improvements in CAH readmissions and patient outcomes are expected to be detected in program years two through five.

The project coordinator conducted internal evaluation activities throughout the fiscal year by tracking activities, process measures, and outcome measures via the Flex Scorecard and

CAH readmissions reports. The Flex Scorecard clearly defines the pre and post intervention outcome measures, as well as providing descriptive notes regarding CAH participation in the training sessions. The progress made on this project is well documented and the activities carried out during this evaluation period supported the intended HRSA core areas and Indiana Flex Program goals described in the Flex Program grant application. Funding for this project appears to have been allocated according to the project Attachment A components.

5.1.9 Commendations and Recommendations

The project coordinator should be commended for including ongoing evaluation activities throughout the fiscal year. Commendations for the project coordinator are also warranted for recruiting 13 CAHs into the project (seven in project year one and six additional for year two), developing a solid relationship with participating CAHs, and representing the Indiana Flex Program in a professional and highly respected manner.

If the current outcome measures are maintained throughout the remaining program years, it is recommended that alternate data sources, such as the Indiana Hospital Discharge Dataset, be used to establish benchmarks for CHF and PN readmission rates. The current baseline data collected in March 2011 was only for one month and was limited to participating CAHs. Although this measure was appropriate for establishing a baseline to which post-intervention data may be compared, it may not be a desirable benchmark for target readmission rates. The CAH Quality Readmissions Project team may also consider reporting CHF and PN measures separately to isolate any difference in readmission rates, costs, average length of stay, and bed utilization between the two conditions. It may also prove beneficial to track the data by hospital in the Flex Scorecard, in addition to aggregating, to detect any differences between hospitals. This level of insight may help focus educational and technical assistance activities at the CAH level. Educating long-term care facilities on discharge information and processes also is recommended.

5.2 Telestroke Network Project

In September 2009, a collaboration was formed between the Indiana Rural Health Association (IRHA), the Indiana State Rural Health Network (InSRHN), the American Heart Association (AHA), Health Care Excel (HCE), and the Indiana State Office of Rural Health (SORH) to develop a statewide InSRHN Telestroke network and to implement the AHA's Get With The Guidelines®-Stroke Care Program (GWTG-Stroke Program) in Indiana CAHs. The goal of the Telestroke Network Project was to bring acute stroke care and state of the art therapies to patients living in rural Indiana through telestroke consultations in emergency departments of participating CAHs.

The InSRHN Telestroke Network Project was two-fold. Part one was the Telestroke Network Project technical component designed to provide readiness assessments for project implementation activities among participating CAHs. Part two of the project was the clinical component and consisted of implementing the AHA's GWTG-Stroke Program. The focus here was to obtain baseline stroke care data and implement evidence-based practice guidelines.

The GWTG-Stroke program is a national initiative for quality improvement to assist hospitals in providing the best evidence-based medical care and treatment for stroke patients. The program is comprised the Patient Management Tool (PMT), which is an interactive web-based assessment and reporting system provided by *Outcome, Inc*. Specific patient-level data is entered into PMT to provide real-time individual hospital and aggregate benchmarking reports. PMT data can satisfy some of the core measure reporting requirements of CMS and other accrediting organizations. The Telestroke Network Project initially committed that CAHs participating in the project would experience at least a 20 percent overall improvement in stroke care patient outcomes.

5.2.1 Evaluation Methods

The methods used to conduct this evaluation involved two branches of examination; the review of secondary data and the collection of primary data. Secondary data was obtained from the Telestroke Project and GWTG-Stroke Program project coordinators, the Flex Program Scorecard, the mid-year and final year progress reports. The primary data collected

by evaluators was in the form of key informant and project coordinator interviews. The review of existing program documents and data focused on identifying project activities, process measures, outcome measures, and evaluation activities, methods and findings. The key informant and project coordinator interviews focused on gathering qualitative to validate findings from internal evaluation efforts, measure CAH satisfaction, and solicit recommendations for improvement.

5.2.2 Funding Allocation

The SORH awarded the IRHA Flex funding in the amount of $130,000.00 to carry out project activities described in the project Attachment A.

5.2.3 Project Activities

Telestroke Project Technical Component

Activities during the technical component phase of the project focused on establishing the infrastructure needed to execute stroke consultation services for participating CAHs. Seven Indiana CAHs requested participation in the project and signed Memorandums of Understanding (MOUs); however, two of the CAHs that were recruited at the beginning of the project were replaced by two new CAHs. Community Hospital of Bremen and St. Vincent Mercy Hospital were unable to participate in the final implementation of the network due to business and contractual factors. Refer to **Table 5.5 Technical Component Participation** for the current list of participating CAHs. Infrastructure activities also included conducting a readiness assessment of each hospital's clinical, information technology (IT), and telemedicine operations capabilities (**reference Table 5.6 Technical Component Infrastructure Activities**). Each CAH was provided a detailed report, which included recommendations for improving their readiness for participation.

Table 5.5 Technical Component Participation

CAH Name	City
IU Health Bedford	Bedford
IU Health Tipton	Tipton
Decatur County Memorial Hospital	Greensburg
Gibson County Hospital	Princeton
Margaret Mary Community Hospital	Batesville
Putnam County Hospital	Greencastle
IU Health Paoli	Paoli

Table 5.6 Technical Component Infrastructure Activities

Project Objective: Implementation of Telehealth services into Indiana's Critical Access Hospitals	
Activity: Continued development of the Indiana Statewide Rural Health Network (InSRHN) Telestroke Network Project	
Data Collection Methods: Telestroke Network Project summary report and final report	
Indicator/Measure	**Status**
Selection of clinical partner	Completed: IU Health
Assessment of stroke protocols and technology in participating CAHs	Completed
Stroke care protocols shared with CAHs from IU Health to ensure quality of care	Completed
Telestroke technology evaluation, testing, specialist and IU Health board approval for use	Completed
Telestroke equipment installation and training	Completed in 4 of the 7 CAHs. The remaining 3 CAHs will finish implementation in November, 2011

The technical component project coordinator performed ongoing project management activities throughout the evaluation period. These activities included oversight of project implementation, conducting educational sessions for participants on legal issues, patient transfer protocols, technology demonstrations, clinical aspects of stroke care, telehealth services, and general question and answer sessions. The program manager also surveyed CAH CEOs to identify additional Telehealth needs in an attempt to satisfy the initial project intention of expanding Telehealth services (i.e. Telecardiology, Telemental Health, etc.) statewide on an annual basis. The results of this survey revealed a low level of interest in expanding Teleheath services and identified LEAN management initiatives as a preferred option for use of Flex funds for quality improvement projects. Therefore, the IRHA and SORH decided to postpone expanding the reach of the Telestroke network to additional Indiana CAHs for years two through five of the program in favor of developing LEAN management initiatives.

GWTG-Stroke Program Clinical Component

Eight CAHs were selected to participate in the clinical component (GWTG-Stroke Program) of the Telestroke Network Project (reference **Table 5.7 Clinical Component Participation**). Initial implementation of the GWTG-Stroke Program focused on obtaining memorandums of understanding (MOUs) with participating CAHs to ensure compliance with project expectations, train clinicians and staff on the GWTG-Stroke Program protocols and *Outcomes, Inc.* patient management tool (PMT) . During this same time period, the participants were collecting baseline data and entering that information into the PMT. The infrastructure activities for the GWTG-Stroke Program component of the project are described in **Table 5.8 GWTG-Stroke Program Clinical Component Infrastructure Activities.**

Table 5.7 GWTG-Stroke Program Participation

CAH Name	City
IU Health Bedford	Bedford
Community Hospital Bremen	Bremen
Decatur County Memorial Hospital	Greensburg
Gibson General Hospital	Princeton
Margaret Mary Community Hospital	Batesville
Putnam County Hospital	Greencastle
Rush Memorial Hospital	Rushville
Green County General Hospital (Lugar)	Linton

Table 5.8 GTWG-Stroke Program Clinical Component Infrastructure Activities

Project Objective: Implementation of telehealth services into Indiana's Critical Access Hospitals	
Activity: Support Initiatives to train clinicians and staff in evidence-based practice guidelines (Get With the Guidelines-Stroke)	
Data Collection Methods: Telestroke Network Project summary report and final report	
Indicator/Measure	**Status**
Identification of a physician champion	Completed
Formation of a Stroke multidisciplinary quality improvement (QI) team	Completed
Physician and staff training regarding the project	Completed
Designing critical pathways	Completed
Improving patient services	Completed
Entering baseline stroke data	Completed

Project activities were managed by the IRHA GWTG-Stroke Program project coordinator,

along with the Quality Improvement Initiatives Director and additional staff members of the AHA. The AHA director and staff conducted bi-monthly teleconferences with participating CAHs to provide technical assistance throughout the project implementation. Although it was determined that the Telestroke Network Project would not be supported with Flex funding past year one of the program, CAHs were offered the opportunity to continue participation in the clinical component. Six of the seven participating CAHs chose to continue with the GWTG-Stroke Program. These CAHs include Community Hospital-Bremen, Decatur County Memorial Hospital, Gibson General Hospital, IU Health-Bedford, Margaret Mary Community Hospital, and Putnam County Hospital.

5.2.4 Process Measures

The process measures included in this evaluation focused on the project management activities and were acquired from the Flex Scorecard (reference **Table 5.9 Process Measures**)

Table 5.9 Process Measures

Project Objective: Implementation of Telehealth services into Indiana's Critical Access Hospitals	
Activity: Continued development of the Indiana Statewide Rural Health Network (InSRHN) Telestroke Network Project	
Data Collection Methods: Flex Scorecard	
Indicators/Measure – Telestroke Project Technical Component	**Status**
Total Population served via Telehealth project	On-going: 2,482,999
Total number of CAHs participating in statewide Telehealth projects	Completed: 7
Total # of participants in telemedicine technical assistance encounters	Completed: 727
Amount and type of assistance provided to CAHs 1) Total number of hits on network web page 2) Total # network newsletters distributed (bimonthly)	 On-going: 2080 Completed: 4
Total number of added specialty and subspecialty consults	Completed: 14
Total number of IUH site visits	Completed: 14

Total number TA provided by IUH via email, phone, etc.	On-going: 95
Total number of project participants for IUH site visits implementation sessions	Completed: 113
Indicators/Measure – GWTG-Stroke Program Clinical Component	**Status**
Total number of CAHs participating in the Telestroke GWTG-Stroke Project	Completed: 8
Total number of training initiatives to clinical staff regarding Evidence-Based Practice guidelines. (GWTG-Stroke bimonthly calls and face to face mtgs)	Completed: 28
Total number of technical assistance meetings for training and networking (includes conf calls)	Completed: 37
One annual report to SORH Flex coordinator	Completed: 1

5.2.5 GWTG-Stroke Performance Measures

The CAH participants collected baseline and follow-up data based on the PMT measures, specifically the performance measures collected on the *Outcome, Inc.* program. This data included information regarding tissue Plasminogen Activator (t-PA) administration. These measures were not recorded in the Flex Scorecard; however, monthly reports were delivered to the IRHA project coordinator from *Outcomes, Inc.* and included individual CAH and aggregated data. The aggregate data for each measure for the period of April 2010 through August 2011 was reported in the Get With the Guidelines Stroke Care Program Final Report. The aggregate data for this evaluation period is provided in **Table 5.10 GWTG-Stroke Program Performance Measures.**

Table 5.10 GWTG-Stroke Performance Measures

Project Objective: Implementation of Telehealth services into Indiana's Critical Access Hospitals	
Activity: Continued development of the Indiana Statewide Rural Health Network (InSRHN) Telestroke Network Project	
Data Collection Methods: Get With the Guidelines Stroke Care Program Final Report	
Indicator/Measure	**Status**
IV rt-PA Arrive by 2 Hour, Treat by 3 Hour:	On-going: 58.6 % of Patients
Early Antithrombotics	On-going: 94.8 % of Patients
Deep Vein Thrombosis (DVT) Prophylaxis	On-going: 91.7% of Patients

Antithrombotics	On-going: 97.2% of Patients
Anticoagulation for Atrial Fibrillation/Flutter	On-going: 90.3% of Patients
Low Density Lipoproteins (LDL) ≥ 100 or not measured – Statin:	On-going: 82.1% of Patients
Smoking Cessation	On-going: 95.8% of Patients

5.2.6 Qualitative Measures

Key informant interviews were conducted with five of the seven CAHs participating in the technical component and six of the eight CAHs participating in the clinical component. Each of the key informants was asked their perceptions regarding benefits of the program, satisfaction with the progress of implementation, barriers to project success, opportunities for improvement, and recommendations for additional outcome measures to be captured in future project evaluations.

Summary of Key Informant Interviews

- Increased professional competency regarding stroke care was reported as the primary benefit to participation in both the technical and clinical components
    - Most CAHs do not have a radiologist on site 24 hours a day. Now the radiologists have the ability to read CT scans remotely
    - Implementation of protocols for prioritizing CT scans for suspected stroke patients in order to determine the type of stroke
    - Prior to implementation of the GWTG-Stroke Program, their CAH did not have a protocol for treating stroke patients and did not use the NIH scale
    - Networking with other CAHs and sharing best practices for stroke care
- All CAHs reported being satisfied with program implementation progress as well as technical and educational support. Except for one CAH, all reported that their hospitals were better equipped to provide stroke care to the populations they serve

- Barriers to implementing the technical component of the project were mostly administrative in nature
    - Credentialing of physicians

    - Contractual obligations with IU Health that required providing patient neurologic consultations. Patients will not always be transferred to Indianapolis; therefore, it does not make sense to have a consultation with an IU Health neurologist and an additional consult with the admitting hospital neurologist
    - Insurance networks in the patients area may not cover neurological services provided by IU Health
- Barriers to implementing the clinical component of the project were mostly resource oriented
    - Outcomes, Inc., patient management tool is cumbersome to use and cannot be merged with CMS Hospital Compare. This results in entering the same data twice
    - Emergency department doctors are still hesitant to use t-PA because of the health risks involved
    - The denominator reported in the Outcomes, Inc., may not be consistent across all CAHs
- The primary <u>recommendation</u> for improving the effectiveness of the program was educating the public on stroke symptoms. Time is the critical factor in improving health outcomes for stroke patients. Unfortunately, many patients do not recognize the signs of a stroke until it is too late to administer T-PA
- Although all of the key informants reported they treat only a few stroke patients each year, all except for one reported the program was extremely valuable to their hospital and expressed concern over the potential loss of Flex funding for continuation of this project.

5.2.7 Success Stories

A key component of this evaluation effort was to identify success stories from participating CAHs that illustrate the effectiveness of the project. The following success stories were extracted in their entirety from the Telestroke Project and GWTG-Stroke Program Final Reports 2010-2011.

<u>Technical Component</u>

- August 8, 2011 Indiana University Health – Bedford: As stated by the IU Health

representative, "I wanted to let you know we had our FIRST Telestroke patient on Saturday, August 6th at 9AM. The patient was transferred from Bedford, Indiana. Dr. Huffman was on call at IUH in Indianapolis, and the telehealth equipment worked flawlessly. From all reports we have received today it appears it was a huge success!"

- Community Hospital of Bremen was not able to participate in the final implementation of the network due to political and business factors related to their service area. However, a representative from their hospital stated that by going through the Telestroke implementation process, they were able to improve their stroke care education and process due to outreach provided by IU Health.

Clinical Component

- *"At IU Health Bedford, being part of the Telestroke program has helped us to identify gaps in documented care of our TIA and stroke patients. The opportunity to come up live on the equipment will enhance our ability to provide effective care for the patients in our community."* – Kathy Lewis, Director of Quality, Compliance, Risk Management and Patient Safety, Indiana University Health Bedford Hospital
- *"DCMH has benefitted from the program in several ways. The most obvious benefit was updating our Stroke Protocols with evidenced based guidelines and practice. This included EMS care, ED protocols and the Inpatient non T-PA and TIA protocols. The program has encouraged our hospital to create a more effective stroke team to implement these practices and improve stroke outcomes. We have also implemented awareness by reaching out to the public and providing well attended community programs. I believe the biggest advantage is the fact that we are looking at individual cases in more detail to continually improve our process and treatment."* – Kathy Stephens, Decatur County Memorial Hospital
- *"The Flex Telestroke program has allowed our facility to move forward with developing Stroke protocols of best practice for the physicians to use when managing Stroke patients seen in our ED or admitted to the medical surgical unit. The development of the protocols also led us to educating our Medical Staff and professional staff about the revised procedures and protocols for managing Stroke patients. We have also increased community awareness through education programs and materials in the physician offices."* – Cindy McCamment, Director, Performance Improvement, Decatur County Memorial Hospital

- *"… I had been in contact with Outcomes prior to knowing our program funding support would continue and an individual annual fee would have been $1800, so the group membership rate of $750 is a tremendous value. Thank you for your part in any negotiation of pricing as it would most likely have been cost prohibitive for us to continue on our own."* – L. Annette Hardy, Quality Coordinator/Diabetes Self Management Education, Putnam County Hospital

5.2.8 Conclusions

The Telestroke Project and GTWG-Stroke Program project coordinators performed internal evaluation activities throughout the fiscal year by tracking and reporting measurable activities and process measures via the Flex Scorecard and mid-year and final year reports. The GWTG-Stroke Program performance measures were tracked and reported through the *Outcomes, Inc.*, web-based system. However, patient health outcome measures were not tracked because these measures had not yet been defined. Both the participating CAHs and project coordinators agree that in order to demonstrate the true effectiveness of the program, patient health outcomes need to be monitored. However, as noted in the key informant interviews, measuring the effectiveness of the program based on patient survival may not be the most appropriate way to determine the quality of the care provided. Co-morbidities confound the relationship between treatment and health outcomes. An additional barrier is that once the patient leaves the CAH, the hospital may lose track of the patient. Therefore, the health status of the patient may not be known if the patient decides to go to a different hospital for additional care.

Although it was ultimately determined that Flex Program funds would be better utilized on LEAN management quality initiatives for program years two through five, feedback from the key informant interviews supports the conclusion that this project was successful in achieving its year one goals and objectives.

The progress made on this project was well documented and the activities carried out during this evaluation period supported the intended Health Resources and Services Administration (HRSA) core areas and Indiana Flex Program goals described in the Flex Program grant application. Funding for this project appears to have been allocated according to the project Attachment A components.

5.2.9 Commendations and Recommendations

The Telestroke Project and GTWG-Stroke Program project coordinators should be commended for including ongoing evaluation activities in their work plans. The informal survey of CAH CEOs that was conducted during the fiscal year revealed that Flex Program funds may have a greater impact on improving the quality of CAH performance and ultimately the health and well-being of Indiana rural residents by focusing on LEAN management initiatives. This timely feedback loop between the SORH, IRHA, and Indiana CAHs illustrates that a high priority has been placed on allocating Flex Program funds where they are most needed.

Although the project will not be expanded to additional Indiana CAHs, evaluators did note some recommendations for the CAHs that plan to continue participating in the Telestroke Network Project. The IRHA project coordinators may consider convening an advisory group with members of each participating CAH to develop proxies for patient health outcomes. In addition, the advisory group also may consider developing a statewide campaign for educating rural residents on the signs and symptoms of a stroke, since the delay in seeking treatment is the biggest barrier to improving health outcomes for stroke patients.

5.3 Medicare Beneficiary Quality Improvement Project (MBQIP)

The Office of Rural Health Policy (ORHP) added the Medicare Beneficiary Quality Improvement Project (MBQIP) to the Flex Program in 2010 under the Health Resources and Services Administration (HRSA) Core Area 1. The overall rationale for the program was that Critical Access Hospitals (CAH) had fewer clinical capabilities, inadequate measures for the processes of care, and higher mortality rates for patients with acute myocardial infarction (AMI), congestive heart failure (CHF) and pneumonia (PN). Although participation in MBQIP is voluntary, it may soon be used to compare CAH performance to other rural and urban hospitals. It is also anticipated that the MBQIP will prepare CAHs to meet future national reporting requirements. The primary goal of the MBQIP is for CAHs to implement quality improvement initiatives that improve operations and patient care.[20]

[20] National Rural Health Resource Center. (May 5, 2011). *FLEX Medicare Beneficiary Quality Improvement Project (MBQIP).* Retrieved from

The MBQIP objectives established in program year one were as follows:

- Increase CAH *Hospital Compare* participation for Phase 1 measures (Pneumonia and Congestive Heart Failure) to 100 percent by Flex FY2012 to improve publicly available data and motivate CAHs to implement related quality improvement initiatives
- Achieve CAH *Hospital Compare* participation for Phase 2 measures (Outpatient and HCAHPS) and non-*Hospital Compare* Phase 3 measures (Pharmacy Review of Orders and Outpatient Emergency Department Transfer Communication) to 100 percent by Flex FY2013 to motivate CAHs to implement quality improvement initiatives
- Achieve a CAH participation rate of 75 percent by Flex FY2013 and 100 percent by Flex FY2014 in a quality improvement initiative to be reported to Centers for Medicare & Medicaid Service (CMS).[21]

The MBQIP timeline and data collection processes were organized in phases by year. These phases are: projected timeline plans for CAH recruitment in program year one; the implementation of quality improvement and technical activities to support data collection, reporting and analysis in program year two; and continued analysis and reporting in program years three through five. CAH recruitment will be continuous throughout the lifecycle of the grant or until 100 percent participation is reached. Hospitals already reporting measures will be encouraged to continue reporting those measures, as well as new measures, meaningful use core objectives, and clinical quality measures according to planned the timeline. [22]

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http://www.ruralcenter.org/sites/default/files/MBQIP%20Overview%20for%20Flex%20Coordinators%20Final_05112011.pdf

[21] National Rural Health Resource Center. (May 5, 2011). *FLEX Medicare Beneficiary Quality Improvement Project (MBQIP).* Retrieved from http://www.ruralcenter.org/sites/default/files/MBQIP%20Overview%20for%20Flex%20Coordinators%20Final_05112011.pdf

[22] National Rural Health Resource Center. (May 5, 2011). *FLEX Medicare Beneficiary Quality Improvement Project (MBQIP).* Retrieved from http://www.ruralcenter.org/sites/default/files/MBQIP%20Overview%20for%20Flex%20Coordinators%20Final_05112011.pdf

5.3.1 Evaluation Methods

The methods used to conduct this evaluation involved two branches of examination; the review of secondary data and collection of primary data. Existing program data was obtained from the MBQIP project coordinator, the Flex Scorecard, the Indiana State Office of Rural Health (SORH), Centers for Medicare & Medicaid Services (CMS) Core Measures Benchmarking Report, January 31, 2011, and the Medicare Beneficiary Quality Improvement Project (MBQIP) Final Report, August 31, 2011. Qualitative data was gathered by interviewing the MBQIP project coordinator.

5.3.2 Funding Allocation

The SORH awarded the Indiana Rural Health Association (IRHA) Flex Program funding in the amount of $15,000.00 to contract with Health Care Excel to carry out activities included in the MBQIP Attachment A.

5.3.3 Project Activities

Activities for Phase 1 of the project included CAH recruitment, assessment of participating CAHs' data collection and reporting processes and technical assistance needs, and reporting of Phase 1 measures. The Flex Program coordinator and MBQIP project coordinator organized two statewide meetings to recruit CAHs and integrate activities into the Flex Program. Flex Program staff also participated in planning and educational sessions to roll out the program. Thirty-two (91%) of Indiana CAHs signed Memorandums of Understand (MOUs) during this evaluation period. Despite multiple efforts by the project coordinator, St. Vincent Salem, St. Vincent Frankfort and Harrison County hospitals have not yet agreed to participate in the project **(refer to Table 5.11 Project Activities**). CAH recruitment efforts will continue until 100 percent of Indiana CAHs are participating in the MBQIP.

Table 5.11 Project Activities

Project Objective: Increase CAH *Hospital Compare* participation for Phase 1 measures (Pneumonia and Congestive Heart Failure) to 100 percent by Flex FY2012 to improve publicly available data and motivate CAHs to implement related quality improvement initiatives	
Activity: Provide direction to encourage Indiana CAHs to ***publicly report data to Hospital Compare*** and CMS on relevant process of care quality measures for inpatient and outpatient care	
Data Collection Methods: Flex Scorecard	
Indicator/Measure	**Status**

Total number of CAHs participating in MBQIP (signed MOUs)	On-going: 32 (91%)
Total number/type of activities to encourage public reporting	Completed: 14 • Contracted with Health Care Excel (HCE) for baseline report (1)– 9/2010 • Initial planning meeting with HCE (1) – 10/2010 • Paul Moore rollout presentation at HIT Summit (1) – 11/2010 • HRSA call for final guidelines (1)– 12/2010 • Spring into Quality breakout with Paul Moore (5) – 3/2011 • MBQIP Update/Review Meeting with CAHS (1) – 7/2011 • Project progress meetings held with HCE by Flex Program coordinator (3) 1/2011 • Project progress meetings held with HCE by Flex Program coordinator (1) 2/2011

5.3.4 Process Measures

The process measures for this evaluation period included the number of CAHs currently reporting the MBQIP Phase 1 Measures to *Hospital Compare*. The focus of Phase 1 measures was pneumonia and congestive heart failure. The goal was to increase CAH *Hospital Compare* participation for Phase 1 measures to 100 percent by FY 2012. At least eighty percent (80.0%) of all Indiana CAHs reported at least one Phase 1 measures data during year one of Flex Program grant cycle. Seventy-seven percent reported all congestive heart failure (HF) and pneumonia (PN) measures to *Hospital Compare*. Almost eighty-three percent (82.8%) reported all HF and seventy-seven (77.1%) reported all PN measures (Refer to **Table 5.12 Phase 1 Performance Measures**). Although Phase 2 measures were not included in this evaluation period, the data collected on these measures and reported in the Flex Scorecard are included in this report, because the activities involved in collecting these measures occurred during this reporting period.

Table 5.12 Phase 1 Performance Measures

Project Objective: Increase CAH *Hospital Compare* participation for Phase 1 measures (Pneumonia and Congestive Heart Failure) to 100 percent by Flex FY2012 to improve publicly available data and motivate CAHs to implement related quality improvement initiatives	
Activity: Conduct an environmental scan to establish baseline measures on CAHs currently reporting Phase 1 measures to CMS Hospital Compare.	
Data Collection Methods: Flex Scorecard	
Indicator/Measure	**Status**
Number of CAHs reporting ALL HF and PN Measures to Hospital Compare	27
Summary for Congestive Heart Failure and Pneumonia	
Heart Failure (HF)	
CAHs reporting all HF measures to Hospital Compare	29
HF-1 Discharge Instructions	29
HF-2 Evaluation of LVS Function	29
HF-3 ACEI or ARB for LVSD	29
HF-4 Adult Smoking Cessation Advice/Counseling	29
Pneumonia (PN)	
CAHs reporting all PN measures to Hospital Compare	27
PN-2 Pneumococcal Vaccination	29
PN-3b Blood Cultures Performed in ED prior to ATX received in hospital	29
PN-4 Adult Smoking Cessation Advice/Counseling	28
PN-5c Initial Antibiotic Received within 6 hours of hospital arrival	29
PN-6 Initial Antibiotic Selection for CAP in Immune Competent Patient	29
PN-7 Influenza Vaccination	28

The focus of Phase 2 was on CAH reporting of Outpatient and Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) measures to *Hospital Compare*. The goal was to increase CAH *Hospital Compare* participation for Phase 2 measures to 100 percent by FY 2013. Eighty percent of all Indiana CAHs reported Phase 2 data during year one of Flex Program grant cycle. About one-third (34.3%) reported at least one outpatient measure and seventeen percent reported all outpatient measures. Almost one-quarter (22.9%) of all CAHS reported median time to fibrinolysis, fibrinolytic therapy received within 30 minutes of emergency department arrival, median time to patient transfer, prophylactic antibiotic selection and initiated within one hour prior to surgery. One-third of all CAHs reported aspirin at arrival and median time to ECG (refer to **Table 5.13 Phase 2 Performance Measures**).

Table 5.13 Phase 2 Performance Measures

Project Objective: Increase CAH *Hospital Compare* participation for Phase 1 measures (Pneumonia and Congestive Heart Failure) to 100 percent by Flex FY2012 to improve publicly available data and motivate CAHs to implement related quality improvement initiatives	
Activity: Conduct an environmental scan to establish baseline measures on CAHs currently reporting Phase 2 measures to CMS *Hospital Compare*.	
Data Collection Methods: Flex Scorecard	
Indicator/Measure	**Status**
CAH Participation in HCAHPS and *Hospital Compare* Outpatient (OP) Measures	
CAHs reporting HCAHPS measures to *Hospital Compare*	29
CAHs reporting at least one Outpatient Measure to *Hospital Compare*	12
CAHs reporting ALL OP Measures 1-7 to *Hospital Compare*	6
OP_1 Median Time to Fibrinolysis	8
OP_2 Fibrinolytic Therapy Received Within 30 Minutes of ED Arrival	8
OP_3b Median Time to Transfer to Another Facility for Acute Coronary Intervention	9
OP_4 Aspirin at Arrival	12
OP_5 Median Time to ECG	12
OP_6 Prophylactic Antibiotic Initiated Within One Hour Prior to Surgical Incision	8
OP_7 Prophylactic Antibiotic Selection for Surgical Patients	8

5.3.5 Conclusions

The MBQIP project coordinator was employed by HCE and contracted by IRHA to implement the MBQIP. The MBQIP was launched on March 3, 2011. The launch featured a HRSA speaker who presented the overview, goals and objectives on the program. Between March 3, 2011 and August 31, 2011, MBQIP activities were focused on hospital recruitment. However, future recruitment plans were not included the year-end report. Year two quality improvement and operations activities will focus on data collection, entry, and reporting to *Hospital Compare*.

Ninety-one percent of Indiana CAHs voluntarily reported at least one MBQIP measure to *Hospital Compare* during this evaluation period. According to the January 31, 2011 CMS report, barriers to participation in *Hospital Compare* included lack of abstraction resources, lack of incentive for CAHs to report, and the small numbers of patients admitted for CHF and PN.

The project coordinator performed internal evaluation activities throughout the fiscal year by tracking and reporting measurable activities and process measures via the Flex Scorecard and final year report. The progress made on this project was well documented and the activities carried out during this evaluation period supported the intended HRSA core areas and the Indiana Flex Program goals described in the Flex Program grant application. Funding for this project appears to have been allocated according to the project Attachment A components.

5.3.6 Commendations and Recommendations

The project coordinator should be commended for achieving a high rate of participation from Indiana CAHs. Commendations regarding the ongoing evaluation activities performed throughout the project period are also in order.

Recommendations for the continuation of the MBQIP include assisting CAHs in data abstraction methods. This includes offering educational sessions, through the CAH Quality Education Program, on the process of data abstraction, data entry, and reporting. A data quality protocol that IRHA may use to check the accuracy of CAH data may also be beneficial..

Section 6 – Strategy III: CAH Quality Educational Programs

Strategy III consists of the CAH Educational Programs and the Pulaski Memorial Hospital Baby-Friendly Certification Project. Critical Access Hospitals (CAHs) have limited resources to provide access to specialty care, primary care physicians, health care technology, financial performance, and organization of services for vulnerable populations. The CAH Quality Educational Program's intention was to fill this void by supplying CAHs with the opportunity to network and share best practices among their peers and to educate CAH personnel in performance improvement. Information from past CAH evaluations and needs assessments was included in the planning process for topics and presenters of each educational program. The Pulaski Memorial Hospital Baby-Friendly Certification Project was added to this area after the five strategy areas were developed, and it is not an education program that is delivered through CAH Educational Programs. However, the PMH Baby-Friendly Certification Project aligns with the goals of the CAH Quality Educational Programs strategy.

6.1 CAH Educational Programs

The vision of CAH Educational Programs was to improve hospital services and leadership by offering quality educational programs that increase the knowledge of CAH staff members on critical issues. The intended audience for the educational programs was CAH chief executive officers (CEO), board members, chief financial officers (CFO), chief nurse officers (CNO), quality improvement directors, and other CAH personnel. The educational programs have been attended by other non-CAH rural health care providers from Indiana and surrounding states. In addition to offering educational programs, the Indiana Rural Health Association (IRHA) produced and distributed a quarterly newsletter, *CAHoots*, and provided Indiana CAHs with technical assistance[23].

6.1.1 Evaluation Methods

Evaluators examined secondary data by reviewing project documentation including the Flex Scorecard, survey results from the three educational programs, and the mid-year and final

[23] Indiana Rural Health Association, *2009-2010 Indiana Rural Health Association Annual CAH Educational Programs Report (2010).*

year reports. All project documentation was provided by the CAH Educational Programs project coordinator.

6.1.2 Funding Allocation

The State Office of Rural Health (SORH) awarded the IRHA Flex funding in the amount of $80,000.00 to carry out project activities described in the project Attachment A.

6.1.3 Project Activities

Project activities involved conducting three educational programs in the areas of leadership, quality and health information technology (HIT); providing technical assistance to all Indiana CAHs; and producing the quarterly *"CAHoots"* newsletter. The IRHA scheduled a health information technology program in fall 2010, a quality-driven program in March 2011, and a leadership program in August 2011. The topics of the educational programs were: staff productivity management, LEAN management techniques, enhancement of board leadership, balanced scorecard implementations, departmental efficiency improvement, supply management systems, integration of materials, management billing, purchasing, patient information systems, work and environment workflow improvement, and/or revenue cycle management. A follow-up survey was administered after each program to assess how participants felt about the content and how they planned to use the information they learned.

6.1.4 Process Measures

The process measures included in this evaluation were taken from the CAH Educational Programs work plan in Attachment 1 of the Flex Program grant application and the project mid-year and year-end status reports. The project coordinator tracked the process measures using the Flex Scorecard. The process measures included in this evaluation period are described in **Table 6.1 Process Measures.**

Table 6.1 Process Measures

Objectives: **1.** Support QI education/training programs for manager, staff and/or board members of CAHs 2. Support initiatives to train CAH clinicians and staff in meaningful use of EHRs, related technologies (e.g., computerized order entry; clinical decision support for high priority conditions) and HIOs. 3. Support CAHs in planning and implementing strategies for improving financial performance.	
Activity: Provide annual CAH educational programs focusing on: quality, leadership, health information technology	
Data Collection Methods: Scorecard, Final Report	
Indicator/Measure	**Status**
Total number of educational programs provided to CAHs leadership, managers, staff, and board of directors	**Completed & On-going**: Three educational programs were conducted during fiscal year 2010-2011 • HIT Summit, November 30-December 1, 2010 • Spring into Quality Symposium, March 2, 2011 • Annual Leadership Seminar, August 12, 2011 Three educational programs will be offered annually through the end of the funding cycle.
Total number participating in each program offered	**On-going**: A total of 416 participants attended the CAH educational programs. HIT Summit 217 Spring into Quality Symposium 117 Annual Leadership Seminar 82 **On-going**: The number of CAHs present at each program was tracked. HIT Summit 13 Spring into Quality Symposium 21 Annual Leadership Seminar 9

Table 6.1 Process Measures (Cont'd.)

Objectives: 1. Support QI education/training programs for manager, staff and/or board members of CAHs 2. Support initiatives to train CAH clinicians and staff in meaningful use of EHRs, related technologies (e.g., computerized order entry; clinical decision support for high priority conditions) and HIOs. 3. Support CAHs in planning and implementing strategies for improving financial performance.	
Activity: Sponsor workshops/other educational programs to improve operational performance of CAHs, focusing on staff productivity management, LEAN management techniques, enhancement of board leadership, balanced scorecard, departmental efficiency, supply management systems, integration of materials, management billing, purchasing, patient information systems, work and environment workflow improvement, and/or revenue cycle review	
Data Collection Methods: Scorecard	
Indicator/Measure	**Status**

Amount and type of assistance provided to CAHs Number of CAHs attending workshops and programs	**On-going**: Technical assistance was provided in a variety of ways. • Total hits on Flex Web site 1513 • Nurse Exec Jabbster Forum Discussions/Comments 119 • Ongoing technical assistance for educational programs/onsite visits 409 • Total number of CAHs network and user group financial meetings 4 • Total number of CAH staff participating in financial user groups (CFO RTs) 85 • Total break out presentations focusing on CAH operational and financial issues 3 • Total in attendance at break out presentations focusing on CAH operational and financial issues 45 • Number of partner meetings/calls (monthly) 16 • Number of meetings for program planning (monthly) 30 • Number of PIMS measures reported through CATs N/A* • Number of additional state measures added for current year N/A*

Table 6.1 Process Measures (Cont'd.)

Objectives: 1. Support QI education/training programs for manager, staff and/or board members of CAHs 2. Support initiatives to train CAH clinicians and staff in meaningful use of EHRs, related technologies (e.g., computerized order entry; clinical decision support for high priority conditions) and HIOs. 3. Support CAHs in planning and implementing strategies for improving financial performance.	
Activity: Distribute the CAHoots newsletter to CAH personnel on a quarterly basis.	
Data Collection Methods: Scorecard	
Indicator/Measure	**Status**
Total number of newsletters distributed.	**Completed & On-going**: 4 newsletters were distributed, one each quarter. CAHoots newsletters will continue to be distributed on a quarterly basis. • Total CAHoots newsletters distributed (quarterly) 4

6.1.5 Outcome Measures

The project plan included collecting baseline data regarding the knowledge base of attendees for selected educational topics, as well as the effects of knowledge gained on organizational activities. Data were collected to demonstrate the level of knowledge gained by CAH personnel after attending each educational program. The survey results reported in this evaluation were gathered from the project coordinators final report of CAH educational programs.

HIT or Miss Summit

The intended outcomes of the HIT or Miss Summit were to improve the knowledge of CAH stakeholders and CAH personnel concerning meaningful use and health information technology (HIT) in order to improve hospital services and revenue. According to the survey results, 100 percent of respondents anticipated being able to apply the strategies and information learned at the summit to improve their work.

Spring into Quality Symposium

The intended outcomes of the Spring into Quality Symposium were as follows:

- Improve the knowledge base of CAH stakeholders and CAH personnel in order to improve emergency department services
- Increase knowledge of and participation in the Medicare Beneficiary Quality Improvement Project (MBQIP)

- Improve hospital financial performance regarding admission/registration, charge integrity, and patient financial services.[24]

According to survey results, 95 percent of respondents reported the material presented in the session concerning emergency department services was relevant and valuable. Regarding increasing knowledge of MBQIP, 89 percent of the respondents said the material presented during the session was relevant and valuable.[25] An assumption was made by the evaluators, based on the symposium agenda, that the presentation entitled "The Uninsured Connection Challenge" educated participants on admission/registration of patients. Eighty-five percent of the respondents reported the information was relevant and valuable. Eighty-four percent of the participants of the charge integrity session reported the material was relevant and valuable. The patient financial services session offered valuable and relevant material to 75 percent of respondents.[26]

Leadership Seminar

The intended outcomes of the Leadership seminar were to improve the knowledge base of CAH stakeholders and CAH personnel on leadership issues in order to improve hospital services.[27] The survey instrument did not include on specific question to address this outcome, rather several questions were asked about the material covered during the course of the day. Ninety-eight percent of the respondents found Joe Tye's "Building a Culture of Ownership on a Foundation of Values" presentation to be relevant and valuable, 77 percent found Billy Marlow and Joanie Perkins' "The Little Hospital That Could" presentation relevant and valuable, and 59 percent of respondents reported that the James Krile's "Three Leadership Tools for Community Engagement" presentation was relevant and valuable to them.[28]

Normally, if 10 percent or more of respondents indicate that the information provided was not relevant or valuable, then the session or topic may be considered an area for improvement. For most of the sessions, less than 10 percent of the attendees reported the information was not valuable or relevant. However, 11 percent of the respondents reported

[24] Carlson, L. (2011). IRHA CAH Educational Programs: Flex Program Work Plan.
[25] Carlson, L. (2011, Aug. 31). IRHA CAH Educational Programs Flex Program Coordinator Final Report.
[26] Carlson, L. (2011, Aug. 31). IRHA CAH Educational Programs Flex Program Coordinator Final Report.
[27] Carlson, L. (2011). IRHA CAH Educational Programs.
[28] Carlson, L. (2011, Aug. 31). IRHA CAH Educational Programs Flex Program Coordinator Final Report.

dissatisfaction with the value and relevance of the "Three Leadership Tools for Community Engagement" presentation from the leadership seminar. The patient financial services presentation at the quality symposium was also near the 10 percent mark, with 8 percent of respondents reporting dissatisfaction with the material presented.[29]

6.1.6 Satisfaction measures

The CAH educational programs project planned to measure participant satisfaction at each of the educational programs.[30] A survey was conducted with program participants after they attended the educational programs. The survey asked participants to rate their overall satisfaction with the program. Results of the survey were found in Attachment A of the project coordinators final report of CAH Educational Programs.

At the HIT or Miss Summit, 95 percent of respondents reported a high level of satisfaction with the program. Results from the Spring into Quality Symposium reported that 100 percent of respondents were satisfied with the program overall.[31] Although there was not one specific question on the survey instrument addressing the overall satisfaction of participants who attended the Leadership Seminar, the project coordinator estimated that 85 percent of the attendees were satisfied with the seminar. This estimate was derived by calculating the average satisfaction score from all three of the presentations included in the seminar.

6.1.7 Conclusions

The CAH quality educational program was designed exclusively to provide CAHs with training and education in the areas of quality, health information technology and leadership. Program year one evaluation activities demonstrated that, overall, people are satisfied with the educational programs and wish to have more offered in the future. The programs and funding provided by IRHA offer CAH staff a great opportunity to network, learn, and share success stories and best practices that might not otherwise have happened due to lack of resources.

[29] Carlson, L. (2011, Aug. 31). IRHA CAH Educational Programs Flex Program Coordinator Final Report.
[30] Carlson, L. (2011). IRHA CAH Educational Programs.
[31] Carlson, L. (2011, Aug. 31). IRHA CAH Educational Programs Flex Program Coordinator Final Report.

The project coordinator performed internal evaluation activities throughout the fiscal year by tracking and reporting measurable activities and process measures via the Flex Scorecard and final year report. The progress made on this project was well documented and the activities carried out during this evaluation period supported the intended HRSA core areas and Indiana Flex Program goals described in the Flex Program grant application. Funding for this project appears to have been allocated according to the project Attachment A components.

6.1.8 Commendations and Recommendations

The project coordinator should be commended for including evaluation activities throughout the fiscal year. Capturing measures related to increase in knowledge, organizational implementation, and satisfaction provided real-time feedback on key project performance measures. However, evaluators noted some areas for improving the precision of the data gathered.

The project coordinator should consider including measures of satisfaction with key features of each program, such as: appropriate level of content, length of session, presenter knowledge, the number of sessions per topic, relevance and usefulness of the session material, quality of information presented, scheduling of the sessions, and venue for the presentation. It is also recommended that participant satisfaction be measured on a 5-, 7-, or 10-point scale from "Very Dissatisfied" to" Very Satisfied" to increase the precision of the measurement. Care should also be taken to avoid "double-barreled" measures. For example, grouping measures like relevance and value together as one measure makes it impossible to discern how the participant feels about each measure separately.
It addition, thought should be given to following up with participants in a timely manner to assess the intermediate-term impact of knowledge gained and changes in organizational activities as a result of attending the program.

Since the intentions were to assess the effects of increased knowledge on organizational activities, participants who indicate any level of intention to implement changes in their activities as a result of attending the session should be contacted at an appropriate interval (e.g. 3 or 6 months) to determine if any changes have occurred and, if not, what has prevented the change from occurring. Participants also should be followed up with to assess

longer-term outcomes and impact. Such measures may include perceptions of improved professional competency, improved job performance, cultural changes within their CAH, and CAH organizational impact. Long-term measures like these may be best captured at 12 month intervals.

Data regarding the usefulness and impact of the IRHA technical assistance, such as: increase in knowledge or skills, likelihood to implement tools or activities presented in the session, and interest in attending future sessions, also should be collected using a 5-, 7-, or 10-point scale. Additionally, data should be collected about the usefulness and impact of the *CAHoots* newsletter, such as: appropriate level of content, adequacy of distribution frequency, relevance and usefulness of the articles, and quality of information.

In sessions where 10 percent or more of the participants report dissatisfaction, low levels of knowledge gained, or interest in implementing changes in their CAH activities, the project coordinator should assess the reasons and identify strategies for improving the session measures in the future. The satisfaction and increase in knowledge measures should be continually monitored to ensure the programs are continuing to meet the fundamental needs of CAHs.

6.2 Pulaski Memorial Hospital Baby-Friendly Certification Project

The Indiana Flex Program added the Pulaski Memorial Hospital (PMH) Baby-Friendly Certification project under the Health Resources and Services Administration (HRSA) Core Area 3. The PMH Baby-Friendly Certification Project was an effort to promote the importance of breastfeeding and increase the initiation and duration of breastfeeding in the Pulaski community. The project's objective was to attain a Baby-Friendly designation through the Baby-Friendly Hospital Initiative (BFHI).[32] As a result of joining this global movement to support healthy mother and child outcomes and relationships, Pulaski Memorial Hospital (PMH) is scheduled to be the first Indiana Critical Access Hospital (CAH) to be recognized as part of the BFHI, thus influencing other Indiana CAHs to practice "Baby-Friendly" techniques.[33] The Baby-Friendly designation supported the overall goal of the Indiana Flex Program to improve health care in rural communities.

The PMH wanted to achieve Baby-Friendly designation, because it is a globally recognized program that would increase the hospital's viability. Specifically, PMH hoped that becoming Baby-Friendly would improve patient care, improve health outcomes for mothers and newborns, increase market share, build staff skills, and elevate the hospital's status and reputation.[34] To become Baby-Friendly, a hospital must follow the 4-D pathway: Discovery, Development, Dissemination, and Designation.[35]

<u>10 Steps to Successful Breastfeeding</u>:

Every facility providing maternity services and care for newborn infants should:

1. Have a written breastfeeding policy that is routinely communicated to all health care staff.
2. Train all health care staff in skills necessary to implement this policy.
3. Inform all pregnant women about the benefits and management of breastfeeding.
4. Help mothers initiate breastfeeding within a half-hour of birth.

[32] Indiana Rural Health Association. (2011). Pulaski Memorial Hospital Baby Friendly Hospital Attachment A.
[33] Berry, S. (2011, Aug. 12). *Baby-Friendly Hospital Initiative Pulaski Memorial Hospital* [PowerPoint slides].
[34] Berry, S. (2011, Aug. 12). *Baby-Friendly Hospital Initiative Pulaski Memorial Hospital* [PowerPoint slides].
[35] Berry, S. (2011, Aug. 12). *Baby-Friendly Hospital Initiative Pulaski Memorial Hospital* [PowerPoint slides].

5. Show mothers how to breastfeed and how to maintain lactation even if they should be separated from their infants.

6. Give newborn infants no food or drink other than breast milk unless medically indicated.

7. Practice rooming in – allow mothers and infants to remain together – 24 hours a day.

8. Encourage breastfeeding on demand.

9. Give no artificial teats or pacifiers (also called dummies or soothers) to breastfeeding infants.

10. Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from the hospital or clinic.[36]

The PMH first registered with Baby-Friendly USA in May of 2010 and entered the Discovery phase on October 1, 2010.[37] Prior to receiving Flex Program funding, PMH had completed the Discovery phase, and was in the Development phase. The PMH approached the Indiana Flex Program in April 2011 for funding. The Flex Program awarded PMH a one-time funding opportunity in the amount of $3,000 to support its mission of becoming a Baby-Friendly designated hospital.[38] This project was not included in the original Flex proposal to HRSA, but the Flex Program had leftover funds available and the objectives of the project met the Flex Program requirements. The activities completed prior to April 2011 were:

- May 2009: Julia and Sharon attended an in-service "Journey to Baby-Friendly" sponsored by La Leche League Indiana and the Indiana Perinatal Network
- May 2009: Post in-service, Sharon and Julia discussed moving Pulaski Memorial Hospital toward Baby-Friendly
- May 2010: Application was sent to Baby-Friendly USA
- June 11, 2010: Baby-Friendly Initiative was presented to administrators at Pulaski Memorial Hospital, and accepted.

[36] Berry, S. (2011, Aug. 31). Pulaski Memorial Hospital Baby Friendly Certification Flex Program Coordinator Final Report.
[37] Berry, S. (2011, Aug. 31). Pulaski Memorial Hospital Baby Friendly Certification Flex Program Coordinator Final Report.
[38] Indiana Rural Health Association. (2011, Apr.). Indiana Rural Health Association Flex Program Memorandum of Understanding.

- September 2010: Attended the Perinatal Hospital Summit on Breastfeeding
- October 1, 2010: Received Baby-Friendly Discovery Path Registry of Intent[39]

6.2.1 Evaluation Methods

Evaluators interviewed the project coordinator, Sharon Berry, and reviewed prepared documents. These documents included the Memorandum of Understanding (MOU), PMH Baby-Friendly presentations, project Attachment A, Flex Scorecard data, and the final project report.

6.2.2 Funding Allocation

The State Office of Rural Health (SORH) awarded the Indiana Rural Health Association (IRHA) Flex funding in the amount of $3,000.00 for PMH to carry out project activities included in the project Attachment A.

6.2.3 Activities and Process Measures

The activities and process measures included in this evaluation were abstracted from the project Attachment A and monthly and final project reports. The project coordinator tracked the activities and measures in the Flex Scorecard. Project activities included applying for the dissemination phase, developing a staff education plan, purchasing educational materials for staff, sending staff to breast feeding in-service education, continuing and completing Baby Friendly education, purchasing an International Lactation Consultant Association membership for the lactation consultant, and paying for additional training. The project coordinator indicated that the completion of the 4-D pathway is ongoing. Refer to **Table 6.2 Process Measures** for details regarding the status of each measure.

Table 6.2 Process Measures

Objectives: 1. Continue to make progress toward our goal of achieving Baby Friendly Hospital Status Designation by entering the Dissemination phase. 2. Continue staff education toward the required 20 hours needed for Baby Friendly Hospital Designation and to provide knowledgeable patient/family and community support.	
Activity: Application for "Bridge to the Dissemination phase" will be sent in by 6/30/2011	
Data Collection Methods: Attachment A, Interview	
Indicator/Measure	**Status**
One application for dissemination phase	Completed: 1

[39] Berry, S. (2011, Aug. 31). Pulaski Memorial Hospital Baby Friendly Certification Flex Program Coordinator Final Report.

	• Check was sent to Baby-Friendly USA on June 9, 2011 to cover cost of Dissemination and Designation phases • Application was received by USA Baby-Friendly, has not been approved.

Table 6.2 Process Measures (Cont'd.)

Activity: Establish a plan to complete the required 20 hours of breastfeeding education to OB staff.	
Data Collection Methods: Attachment A, Interview, Scorecard	
Indicator/Measure	**Status**
One plan developed for breast education training	Completed: 1 • Baby-Friendly work plan completed and submitted to Baby-Friendly USA in June 2011 (final work plan was submitted to Baby-Friendly USA end of September 2011). • A staff education plan to complete 20 hours of breast feeding education was finished in June 2011 (ongoing, two-thirds of the way through training).
Activity: Purchase additional educational material to enhance program education to staff.	
Data Collection Methods: Interview	
Indicator/Measure	**Status**
Breastfeeding doll Breastfeeding benefits box Bookmarks Successful Breastfeeding Folding Display and case Educational DVDs	Completed: All educational materials were purchased on May 12, 2011, except educational DVDs
Activity: Send staff to breastfeeding education in-services as available.	
Data Collection Methods: Interview, Scorecard	
Indicator/Measure	**Status**
Staff have attended some educational sessions.	On-going.
Activity: Continue and complete education regarding Baby Friendly Education to the rest of PMH practicing physician/FNP groups.	
Data Collection Methods: Attachment A, Interview	
Indicator/Measure	**Status**
Luncheon scheduled on July 20, 2011 for Family Nurse Practitioners. Physicians were given the information on what they need to do to obtain CME credits.	On-going. Staff received some education. Physicians have not yet taken the classes to get CME credits.

Table 6.2 Process Measures (Cont'd.)

Activity: Pay for cost of Lactation Consultant ILCA membership ($165)	
Data Collection Methods: Interview	
Indicator/Measure	**Status**
Membership purchased.	Completed.
Activity: Pay for additional educational training for Spring/Summer 2011	
Data Collection Methods: Interview, Scorecard	
Indicator/Measure	**Status**
Total number of trainings received by lactation consultant and counselor	Completed Per, interview, lactation consultant attended training in the summer and in September.
Activity: Final report of progress made to be provided July 2011.	
Data Collection Methods: Final Report Document, Attachment A, Scorecard	
Indicator/Measure	**Status**
One report submitted to Flex Coordinator	Completed: 1 Report was sent to Flex Program Director on August 31, 2011
Activity: Conduct Community Education Training	
Data Collection Methods: Final Report Document, Attachment A, Scorecard	
Indicator/Measure	**Status**
Number of breast feeding educational sessions provided to the community (#clinics)	Completed: 19
Number in attendance at community training sessions	Completed: 20

Currently, PMH is still in the Development phase. The application for progression to the Dissemination phase was sent to Baby-Friendly USA several times. After finally receiving the application, Baby-Friendly USA reviewed it and sent it back to PMH for edits. While awaiting approval from Baby-Friendly USA, PMH began working on components of the Dissemination phase. This included creating a plan to complete all 20 of the education training hours, of which two-thirds have been completed, as well as developing a plan for breast education training. The breast education training plan was sent to Baby-Friendly USA at the end of September.

Ten education sessions were provided to PMH staff during the funding period and a total of 21 individuals attended the educational training sessions over the three month period. The

lactation consultant did not receive any training in May, June or July. In May, 10 clinics were provided to the community; and in June, four clinics were provided with breastfeeding education sessions. In July, four lactation stations were set up at the Pulaski county fair. Attendance of community members at the clinics was recorded. A total of 20 community members attended the community training sessions. Monthly reports were submitted to the Flex Coordinator.

Efforts to comply with additional criteria for Baby-Friendly status included purchasing educational materials for the staff to use when teaching and ongoing practitioner education. In addition, the hospital finished training a lactation consultant and the ILCA membership was purchased. Educational materials purchased with Flex Program funds consisted of a breastfeeding doll, breastfeeding benefits box, bookmarks, and a *Successful Breastfeeding* folding display case.

In order to achieve the Baby-Friendly designation, physicians and practitioners who help deliver babies must receive continuing medical education credits in the area of breastfeeding. The project coordinator provided this information to the three physicians responsible for delivering babies at PMH; however, the physicians have not yet attended the courses to receive the required continuing medical education credits. The lactation consultant attended conferences for education training in summer and September 2011. Additionally, PMH used Flex Program funds to purchase a membership in the International Lactation Consultant Association for the lactation consultant.

6.2.4 Conclusions

The PMH is still working toward becoming Baby-Friendly. Most of the activities proposed in the project Attachment A were completed; however, some are still ongoing. At the end of the evaluation period, PMH had not yet reached the dissemination phase. Their application had been sent and is currently awaiting approval from Baby-Friendly USA. Once the required education courses have been completed, the hospital can move forward on the 4-D Pathway. Flex Program funding afforded PMH the opportunity for community outreach, staff education, purchase of training materials and professional memberships; and it provided financial resources to cover the cost of Dissemination and Designation phase

requirements. Currently, there are not any CAHs that have achieved Baby-Friendly USA designation and PMH hopes to be the first.

The project coordinator performed internal evaluation activities throughout the fiscal year by tracking and reporting measurable activities and process measures via the Flex Scorecard and final year report. Although the progress made on this project was well documented in the Flex Scorecard, the final report lacked pertinent information. Evaluators were able to determine that the activities carried out during this evaluation period supported the HRSA core area 3. Funding for this project appears to have been allocated according to the project Attachment A components.

6.2.5 Commendations Recommendations

The project coordinator should be commended for recognizing the benefits to both the community and PMH of achieving Baby-Friendly designation, and championing this effort among Indiana hospitals.

Recommendations for this program may not be warranted as Flex Funding for the PMH Baby-Friendly Certification Project will not continue into the next funding cycle. However, the final report should be updated to include the outcomes of all proposed activities from Attachment A. The final report included detailed information about project activities that occurred before PMH received Flex Program funding, but did not address all activities during the Flex Program funding period. For example, the final report did not report whether PMH had submitted the application for "Bridge to the Dissemination phase". Additionally, the final report did not include the status for the purchase of training materials or an ILCA lactation consultant membership.

Data collected in the Flex Scorecard did not entirely align with the activities from Attachment A.

The data reported in the Flex Scorecard documented the number of training sessions provided to the community and the number of people who attended the training sessions. However, there were not any activities proposed in Attachment A concerning offering community educational sessions, although the Attachment A suggested that educational materials would be purchased for use in patient and community education sessions.

Section 7 – Strategy IV: Video Conferencing/e-Learning Project

The Video Conferencing/ e-Learning Project filled a much needed technological void among Indiana Critical Access Hospitals (CAHs). A survey of CAHs conducted by the Indiana Rural Health Association (IRHA) in April 2010 revealed that only 33 percent of Indiana CAHs used any form of video conferencing equipment in their normal business operations.[40] In an effort to increase connectivity between the Indiana CAHs, the IRHA created the Video Conferencing/e-Learning project with Flex Program funds. The Indiana State Rural Health Network (InSRHN) was selected as a partner for project implementation due to the existing networking meetings and trust level with the IRHA and among InSRHN member CAHs.

The goal of the project was to increase connectivity between CAHs for the purposes of improving communication, education, strengthening relationships, reducing CAH travel costs, and increasing meeting participation. The Video Conferencing/e-Learning project provided the medium through which CAHs could network with each other, share information related to best practices, and participate in educational opportunities.

7.1. Evaluation Methods

The methods used to conduct this evaluation involved a review of secondary data obtained from the Video Conferencing/e-Learning project coordinator, the Flex Program Scorecard, and the mid-year and final year progress reports, and the project Attachment A. Qualitative primary data was also collected by evaluators through key informant interviews with CAH participants, the Video Conferencing/e-Learning project coordinator, and the Indiana Flex Program coordinator. The review of existing program documents and data focused on identifying internal evaluation activities, methods and findings. The primary data collection focused on gathering qualitative feedback from participating CAHs regarding their satisfaction with the project and recommendations for improvement. Interviews with the Flex project coordinator and program coordinator guided the development of the key informant interview guide.

[40] Sanders, B. (2011, Aug.). Videoconferencing and e-Learning Flex Program Coordinator Final Report.

7.2 Funding Allocation

The State Office of Rural Health (SORH) awarded the IRHA Flex Program funding in the amount of $127,082 to carry out project activities included in the project Attachment A.

7.3 Project Activities

Activities during the initial phase of the project focused on establishing the infrastructure needed to deliver the video conference and e-Learning services. The IRHA solicited competitive bids through an RFP process to purchase the equipment needed to establish video conferencing technology between IRHA and participating CAHs.[41] The IRHA then partnered with the Indiana Statewide Rural Health Network (InSRHN) to pilot the video conferencing solution with six InSRHN CAHs (reference **Table 7.1 Pilot CAHs**). During the first quarter of 2011, the IRHA made arrangements with the six pilot locations to host other hospitals within an hour and a half of their locations.[42] This offered all 24 of the InSRHN CAH member staff the opportunity to attend IRHA and InSRHN meetings either at their own location or a CAH site much closer to home. All of the project infrastructure activities are described in **Table 7.2 Infrastructure Activities**.

Table 7.1 Pilot CAHs

CAH Name	City
IU Health Bedford	Bedford
Community Hospital of Bremen	Bremen
Decatur County Memorial Hospital	Greensburg
Gibson General Hospital	Princeton
IU Health Tipton Hospital	Batesville
White County Memorial Hospital	Greencastle

Table 7.2 Infrastructure Activities

Project Objective: Create a statewide comprehensive *Video conferencing & e--Learning Program* to support CAHs, communities, rural and urban hospitals, and other community providers in developing local and/or regional health systems of care.	
Activity: Create a statewide video conferencing platform for CAHs to use for meetings, training, and educational opportunities	
Data Collection Methods:	
Indicator/Measure	**Status**
Installation of Video Conferencing Bridge	Complete: Installed 10/2010
Number of CAHs participating as pilot sites for the video conferencing/e-Learning network	Complete: Six CAHs were recruited as of 1/2011

[41] Sanders, B. (2011, Mar. 12) FLEX Videoconferencing E-Learning RFP and continuance request for September 2011-August 2012.
[42] Sanders, B. (2011, Mar. 12) FLEX Videoconferencing E-Learning RFP and continuance request for September 2011-August 2012.

7.4 Process Measures

The process measures included in this evaluation focused on the infrastructure and ongoing project management activities and were acquired from the Flex Scorecard (reference **Table 7.3 Process Measures**).

Table 7.3 Project Management Process Measures

Project Objective: Create a statewide comprehensive *Video conferencing & e-Learning Program* to support CAHs, communities, rural and urban hospitals, and other community providers in developing local and/or regional health systems of care.	
Activity: Build out the statewide video conferencing platform for CAHs to use for e-Learning opportunities.	
Data Collection Methods: Flex Scorecard	
Indicator/Measure	**Status**
Number of CAH staff participating in video conferencing calls	Completed: 50 & On-going
Total number of CAHs participating in e-Learning opportunities	Completed: 12 & On-going
Total IRHA/FLEX staff and evaluators participating in the video conferencing project	Completed: 14 & On-going
Total number of video-conferencing calls	Completed: 22 & On-going
Total number of people participating on video-conferencing calls	Completed: 163 & On-going
Total attendance at educational events/ training	Completed: 114 & On-going
Activity: Provide technical assistance and consultation.	
Data Collection Methods:	
Indicator/measures	**Status**
Total number of CAHs provided technical assistance for video conferencing/e-Learning initiatives	Completed: 9 & On-going
Total type of assistance provided for technical assistance to CAHs for video conferencing/e-Learning initiatives	Completed: 90 & On-going
Activity: Facilitate User Group Meetings.	
Data Collection Methods:	
Indicator/measures	**Status**
Total number of CAHs participating in virtual learning user groups	Completed: 20 & On-going
Total number of University/Higher Learning groups participating in virtual learning user groups	Completed: 22 & On-going
Total number of people participating in virtual learning user groups	Completed: 28 & On-going
Total number of CAHS provided technical assistance	

7.5 Outcome Measures

Anticipated outcomes of project year one included satisfactory survey results for statewide collaborative participation in video conferencing and e-Learning opportunities and establishing baseline data for the number of CAHs participating in video conferencing calls and e-Learning opportunities.[43] Baseline data were intended to detect trends in participation for years two through five. Participant satisfaction for program year one was determined through the key informant interviews and is discussed in the Qualitative Measures section, and the baseline data for CAH participation rates were included as part of the process measure evaluation.

7.6 Qualitative Measures

Key informant interviews were conducted with two of the six pilot CAHs. Each of the key informants was asked their perceptions regarding benefits of the program, satisfaction with the progress of implementation, barriers to project success, and opportunities for improvement. The feedback on the project is limited due to only two key informants accepting the interview request.

Summary of Key Informant Interviews

- High level of satisfaction was reported by one key informant. The second key informant did not provide any indication of satisfaction or dissatisfaction with the project.
- Obvious reduction in travel time and expenses was reported as the primary benefit. This allows more people to participate in meetings.
- The biggest barrier to project execution is communication
    - Pilot site IT staff and site administrator are not aware of who is attending the meetings. Currently any site that offers access must set up the equipment in case someone shows up for the video conference. Our IT staff have already discussed that we will not be able to participate next year if this process continues. It is a waste of time to have IT staff set up the equipment if there is not going to be attendees

[43] Sanders, B. FLEX Videoconferencing E-Learning RFP and continuance request for September 2011-August 2012.

    - The process for scheduling meetings and reserving the room is confusing
    - Site administrator is not aware of who is attending meetings, so if something goes wrong, the administrator does not know who to contact
- Recommendations were related to process improvements
    - When invitees RSVP for the Video Conferences, it should respond a contact at IRHA, and the person from IRHA should contact the site administrators with at list of those planning to attend at their site
    - It would also be helpful to set up these meetings on a certain day of each month (i.e. 2nd Tuesday of each month)

7.7 Success Stories

A key component of this evaluation effort was to identify success stories from participating CAHs that illustrate the effectiveness of the project. The following success stories were extracted in their entirety from the Video Conferencing/e-Learning Project Final Report, August 2011.

- Community Hospital of Bremen was able to use the video conferencing technology established through this program to meet with their auditors in Indianapolis after business hours. This saved the auditors 5-6 hours on the road, and the hospital saved the cost of paying the hourly rate to the auditors for this travel time

- A Flex Quality Networking Council has been created that will meet monthly, solely over video conferencing, to meet MBQIP objectives

- Many people have had scheduling conflicts for various InSRHN roundtable meetings throughout the year. We have been able to accommodate several last minute requests to add video conferencing to a meeting so that staff could attend without leaving their hospital

- Jim Miller, Associate Network Director of IRHA, facilitated our first e-Learning session on August 4th, 2011. Jim successfully shared a presentation with over 24 individuals using the video conferencing technology enabled by this program.

7.8 Conclusions

This project built the capacity to bring Indiana CAHs together in a cost-effective manner. Staff members at participating CAHs are now able to conduct business with their peers without having to leave their offices. This has resulted in reduced travel costs and has increased meeting participation. In the project final year report, the project coordinator estimated that meeting participants have saved as much as six hours of productivity per meeting by conducting the meeting via video conference. The infrastructure and project management activities completed in program year one established the foundation for expanding the video conferencing network and additional services during program years two through five. It is anticipated that the project will be expanded statewide to include all remaining Indiana CAHs that wish to participate.

The project coordinator performed internal evaluation activities throughout the fiscal year by tracking and reporting measurable activities and process measures via the Flex Scorecard and mid-year and final year reports. The progress made on this project was well-documented and the activities carried out during this evaluation period supported the intended HRSA core areas and Indiana Flex Program goals described in the Flex Program grant application. Funding for this project appears to have been allocated according to the project Attachment A components.

7.9 Commendations and Recommendations

The project coordinator should be commended for including ongoing evaluation activities as part of the project management duties. The project coordinator also should be recognized for implementing a technologically-complex project in a relatively short period of time.

In order to improve overall satisfaction with the project, it is recommended that the process for scheduling meetings be revised to reduce the labor burden on host sites. Training on how the process for scheduling meetings also should be provided to the site administrators. Ongoing project evaluation efforts may be improved by conducting satisfaction surveys on a regular basis. The surveys should include measures related to the reliability of the technology, increase in access to information, usefulness of the information provided, and quality of the information. In order to increase the precision of the survey results, it is

recommended that at least a 5-point scale be used for measuring responses. This will improve the project coordinator and evaluators ability to track changes in satisfaction measures over time.

Section 8 – Strategy V: Facilitate Conversion of Small Rural Hospitals to CAH Status

Critical Access Hospitals (CAHs) are hospitals certified to receive reasonable cost-based reimbursement from Medicare. It is anticipated that the reimbursement will improve hospital financial performance and reduce or prevent hospital closures.[44] Reimbursement is administered by the Centers for Medicare & Medicaid Services (CMS). Individual CAH leadership teams determine if the hospital meets the designation criteria and if CAH status would be beneficial. In order to be designated as a CAH, a hospital must meet the established criteria. The criteria for CAH designation can be found at https://www.cms.gov/MLNProducts/downloads/CritAccessHospfctsht.pdf. The process for obtaining CAH designation can be found at http://www.raconline.org/info_guides/hospitals/cahfaq.php.

The Indiana State Office of Rural Health (SORH) director and Flex Program coordinator provide the resources and technical assistance to small rural Indiana hospitals that wish to seek CAH status. During this reporting period, there were not any Indiana hospitals that sought assistance for conversion to CAH status.[45]

8.1 Evaluation Methods

Evaluators requested qualitative information about CAH conversion from the Flex Program coordinator via telephone and email. Data documenting CAH conversion activities and number of CAH conversions were obtained from the Flex Scorecard.

[44] RAC Online. (2011, June 15). CAH FAQs. Retrieved from http://www.raconline.org/info_guides/hospitals/cahfaq.php#whatis
[45] IRHA (2011). *CAH Conversion*.

8.2 Funding Allocation

Flex Program funds are not directly allocated to rural hospitals for conversion to CAH status. Resources and technical assistance to support conversions are provided by the IRHA Flex Program coordinator and the SORH director through Flex funds.

8.3 Conclusions

The SORH director and Flex Program coordinator reported that there currently were not any Indiana hospitals eligible to apply for CAH status due to the distance and/or geographic requirements. Data obtained from the Flex Scorecard supported the Flex Program coordinator's feedback. Although measures for CAH conversion activities were included in the Flex Scorecard, the values for this reporting period were zero (refer to **Table 8.1 CAH Conversion.** The SORH director and Flex Program coordinator will remain available to provide high quality technical assistance and support CAH conversions through the remainder of the grant award, September 1, 2011-August 31, 2015.[46]

Table 8.1 CAH Conversion

Indicator/Measure	Status
Documentation of CAH conversion assistance activities	0
Number of CAH conversions	0
Amount and type of assistance provided to hospital	0

8.4 Recommendations

This program may be beneficial to Indiana hospitals seeking CAH designation in the future. Conversion and technical assistance should continue throughout the remainder of the Flex Program grant award, September 1, 2011 through August 31, 2015.

[46] IRHA (2011). *CAH Conversion*.

Section 9- Indiana State Rural Health Plan

The Health Resources and Services Administration (HRSA) requires Flex Program funded states to develop a Center for Medicare and Medicaid Services (CMS) approved state rural health plan.[47,48] In accordance with this requirement, the Indiana State Office of Rural Health (SORH) produced the *2009, 2010, and 2011 Indiana State Rural Health Plans.*[49] The *2009, 2010,* and *2011 Indiana State Rural Health Plans* are documents that provide economic, workforce, and health care needs data for counties served by Indiana's CAHs, directives for rural health planning through partnership and collaboration, and goals for the development of an integrated rural health care system. The purpose of each plan was to provide a "map for improving the health of Hoosiers through a more accessible, efficient, accountable system of service delivery and Flex funds spending" (p. 11).[50]

9.1 Evaluation Methods

Evaluators reviewed the *2009, 2010,* and *2011 Indiana State Rural Health Plans,* requested information from the SORH director on guidance used to develop each plan and validation of CMS approval. A matrix was developed to compare the contents of each report by section and year.

9.2 Conclusions

The 2009, 2010, and 2011 reports were consistent in providing economic, workforce, and health care needs data for counties served by Indiana's CAHs. Each year's report was updated to reflect the current data in each area (Forward, Section I: A Picture of Indiana's Rural Population, Section II Critical Access Hospitals, and Section III: The Need for Health Professionals). New report components were added in 2010 and 2011 (Section IV and V) to highlight Flex Program initiatives. Each report identified themes or areas of work, but goals, objectives and activities were not included. Data was not provided on guidance used to

[47] Health Resources and Services Administration. (n.d.). What is the FLEX Program? Retrieved from http://www.hrsa.gov/healthit/toolbox/RuralHealthITtoolbox/Introduction/flex.html
[48] Centers for Medicare and Medicaid Services. (Apr. 2009). Critical Access Hospital Fact Sheet. Retrieved from https://www.cms.gov/MLNProducts/downloads/CritAccessHospfctsht.pdf
[49] Indiana Rural Health Association (n.d.). Indiana Rural Health Association – Resources. Retrieved from http://www.indianaruralhealth.org/index.php?src=gendocs&ref=Flex%20Resources&category=IRHA%20Programs
[50] Indiana Rural Health Association. (2009). *Indiana State Rural Health Plan.*

develop each plan or CMS approval. The SORH director reported that the plan was HRSA approved.

9.3 Recommendations

It is recommended that the SORH director seek CMS approval for the 2011-2012 Indiana State Rural Health Plan and document the approval in the report. Additional recommendations for future Indiana State Rural Health Plans are included in **Section 11-Program Commendations and Recommendation** of this report.

Section 10 - Rural Health Network Strategic Planning

The Health Resources and Services Administration (HRSA) requires that Flex Program funded states conduct planning for improving rural health networks.[51] Rural health networks are collaborations among health care providers who pool resources to improve access to care and service delivery. Rural health networks generally include a rural hospital and partnerships to other organizations based upon need.[52] Rural health networks can be informal relationships or formal institutions that include a leadership or governing body, memorandums of understandings (MOUs), and legal agreements for services and contributions.[53] In accordance with this requirement, the Indiana Rural Health Association (IRHA) developed the Indiana Statewide Rural Health Network (InSRHN). The InSRHN was created to "provide support to rural entities in the development of formal health care networks in order to coordinate; improve and expand access to quality essential health care services; and enhance the delivery of health care in rural areas."[54]

Indiana Statewide Rural Health Network (InSRHN)
About InSRHN
InSRHN is a horizontal network made up of 20 CAHS and 3 rural hospitals.
InSRHN Services
Roundtables: Statewide peer discussion groups. **Telestroke**: Neurology consults to improve care for patients having an acute stroke and being treated in rural emergency department of CAHS and successful implementation of "Get with the Guidelines" protocols for stroke care. Telestroke is partnership with Indiana University Health, the Flex Program, and IRHA. **TeleMental:** Mental health consults to improve care for mental health patients and relationship development between rural hospitals and mental health centers or practitioners. TeleMental is partnership between HRSA, ORHP, IRHA and Affiliated Services Providers of Indiana. **CAH Video Conferencing Bridge and Statewide Tele-Learning Project:** Statewide video conferencing network to enhance face-to-face virtual communication and education.

[51] Health Resources and Services Administration. (n.d.). What is the FLEX Program? Retrieved from http://www.hrsa.gov/healthit/toolbox/RuralHealthITtoolbox/Introduction/flex.html
[52] Health Resources and Services Administration (n.d.). What is a rural health network? Retrieved from http://www.hrsa.gov/healthit/toolbox/RuralHealthITtoolbox/Collaboration/whatisnetwork.html
[53] RAC Online. (2011, Feb. 23). Rural networking and rural collaboration. Retrieved from http://www.raconline.org/info_guides/networking/faq.php#types
[54] Indiana Rural Health Association. (n.d.). Indiana Rural Health Association—Indiana Statewide Rural Health Network. Retrieved from http://www.indianaruralhealth.org/index.php?submenu=IRHA&src=gendocs&ref=InSRHN&category=IRHA%20Programs

10.1 Evaluation Methods

Evaluators requested information about the InSRHN from the Flex Program coordinator and project coordinators. Historical qualitative data was collected from several members of the IRHA Flex Program project coordinators. The evaluators were also directed to the IRHA InSRHN Web site and Rural Assistance Center Web site for detailed information. The evaluators integrated other qualitative data captured during face-to-face interviews, follow-up telephone calls, and electronic mail (email) conversations into the findings.

10.2 Conclusions

The InSRHN was developed through a one year HRSA Rural Health Network Development Grant (2007) and a three-year Office of Rural Health Policy (ORHP) Rural Health Network Development Grant (D06RH08997-02-00: May 2008-April 2011). The mission of InSRHN is "to create a network of rural providers dedicated to improving their ability to deliver high-quality health care to rural residents."[55] Although the InSRHN is an IRHA project, IRHA staff and Flex Program staff have leveraged the network, via roundtables, to enhance discussion and provide educational and technical assistance opportunities to all rural health partners including Flex Program and CAH leadership. These opportunities were initially funded by federal grants; however, the IRHA program administrators designed and executed a successful sustainability plan to maintain community support for this resource.

10.3 Recommendations

- Include a code key or data book with the dissemination of the InSRHN ROI scorecard so the reader can understand the terminology, definitions and calculations.
- Continue to leverage and integrate the InSRHN network as a tool to execute IRHA, SORH, and Flex projects.
- Document the InSRHN projects that specifically support Flex Program initiatives, such as the Cardinal Pharmacy Contract group purchasing order that makes medications available to member hospitals at very low cost, thereby maintaining access and availability of the rural health care infrastructure (HRSA Flex Program Core Area 3)

[55] Indiana Rural Health Association. (n.d.). Indiana Rural Health Association—Indiana Statewide Rural Health Network. Retrieved from http://www.indianaruralhealth.org/index.php?submenu=IRHA&src=gendocs&ref=InSRHN&category=IRHA%20Programs

Section 11 – Program Commendations and Recommendations

The State Office of Rural Health (SORH) and the Indiana Rural Health Association (IRHA) should be commended for developing a strategy for its Flex Program that clearly links each project and related objectives to the Health Resources and Services Administration (HRSA) core areas. Both organizations also should be recognized for the following achievements:

- Increasing satisfaction among CAH CEOs regarding improved communication between the SORH and the IRHA, which resulted in the delivery of consistent messages regarding the Flex Program
- Leveraging the InSRHN network as a platform for piloting Flex Program projects, specifically the Telestroke Network Project and Video Conferencing/e-Learning Project.
- Increasing professional competency regarding stroke care at participating CAHs
- Increased professional competency and improved processes for reducing congestive heart failure and pneumonia readmissions at participating CAHs.
- Increased technologic capacity at participating CAHs.
- Placing a high value on conducting on-going evaluation activities within each project throughout the fiscal year. This led to swift changes in project activities that are anticipated to have an increased, positive effect on Indiana CAHs and rural Indiana residents.
- Improving communication and strengthening relationships between CAHs through project-based activities.

The following recommendations are based on an objective analysis of the data, interviews, and project documentation reviewed during the evaluation. The recommendations are intended to help the SORH improve its Flex Program by better meeting the needs of the Indiana CAHs it serves and achieving national Flex Program goals.

11.1 Programmatic Recommendations

Although the SORH and IRHA established five strategic areas for improving quality of care, access to care, and financial stability for Indiana CAHs, a comprehensive strategic plan that links the rural health needs identified in the Indiana Rural Health Plan (IRHP) to goals and

SMART (specific, measurable, achievable, realistic, and time-bound) objectives is needed. Currently, the connection between the rural health needs described in the IRHP and the five strategic areas outlined in the 2011 grant application is not clearly defined. Therefore, it is recommended that the SORH and IRHA develop a 3-5 year strategic plan that links the Indiana Flex Program activities to the needs identified in the IRHP, national Flex Program goals, and HRSA core areas.[56] The strategic planning process should include all Flex Program stakeholders. The guidelines recommended for the strategic plan are as follows:

- Consider it a living document that is routinely evaluated and modified according to current community needs and policies.
- It should strengthen the rural health care infrastructure by identifying priority area that address health challenges in Indiana's rural communities including initiatives to support the relevant issues related to the health of Indiana's rural citizens beyond availability and access to health care services, such as risk behaviors, social determinants of health and expanded EMS services and farm injury prevention.
- It should be sustainable.
- It should define the projects needed to fulfill the mission, vision, goals and objectives of the program.

The CAH CEO interviews revealed that since the shift from a site-based to a project-based process for allocating funds, some CAHs are not able to benefit fully from the Flex Program. The Telestroke Network Project was the primary example given to illustrate this issue. Due to business and logistic barriers, some CAHs were not able to participate in the project and therefore, were not able to benefit from the funding allocated to this project. While all of the CEOs who were interviewed recognized the benefits to the national Flex Program associated with the project-based approach, in some instances it has a detrimental effect at the individual CAH level.

The project-based approach also has led to a slight perception among CAHs that the IRHA may be benefiting more from the project-based approach than the individual CAHs. Therefore, it is recommended that during the strategic planning process, the SORH, IRHA, and other program stake holders consider opportunities for CAHs that are not able to

[56] Department of Health and Human Services. (2001, May 2). Framework for Program Evaluation in Public Health. Retrieved from http://www.cdc.gov/mmwr/preview/mmwrhtml/rr4811a1.htm

participate in current Flex Program projects to receive Flex Program funds. The IRHA also may consider including a communication plan with the strategic plan that conveys the added value it brings to the Flex Program.

It is also recommended that during the strategic planning process, the SORH and IRHA consider re-evaluating the allocation of funds across HRSA core areas. Currently, over half of the Flex Program funds received by Indiana are dedicated to quality improvement initiatives. Specifically, the SORH and IRHA may investigate CAH interest in developing a statewide education program on increasing awareness among rural residents on how to identify the signs of a stroke. The professional competency and technology are now in place to provide excellent stroke care in participating CAHs; however, the biggest barrier to improved patient outcomes is diagnosing the stroke in time to administer t-PA.

Once the Indiana Flex Program strategic plan is developed, the specific project work plans should be written to include SMART objectives as well. Although each of the current Indiana Flex Program projects has at least one objective, it is not considered to be a SMART objective. Defining SMART objectives helps focus project activities and increases the effectiveness of evaluation efforts.

Each Indiana Flex Program project clearly defined appropriate and useful process measures; however, there was a notable lack of health outcome measures. The evaluation team attempted to gather potential measures from the key informant interviews, but was unsuccessful. The clinicians that participated in the interviews struggled to identify measures that would accurately reflect the project's ultimate impact on patient health for multiple reasons. Therefore, it is recommended that the SORH director and IRHA Flex Program coordinator collaborate with the Technical Assistance and Services Center (TASC) or other qualified organization to conduct training with Indiana CAH clinicians and project coordinators on identifying health outcome measures related to each project. For example, HRSA established the Area Health Education Center (AHEC) Training and Consultation Center (A-TrACC) specifically to deliver technical assistance to Area Health Education Centers (AHEC) nationwide on performance and outcome measure identification and data collection methods. Perhaps a similar model would be beneficial to the Flex Program.

The need for a centralized data collection repository has been well documented. Key informant interviews with representatives from CAHs participating in the CAH Readmissions Project and Telestroke Network Project emphasized the need to reduce the number of data collection tools they are currently using. Although all agreed that collecting relevant measures is beneficial, entering the same data multiple times can be a burden on limited resources. Therefore, it is recommended that the Flex Program continue its secure portal and MBQIP activities, while being mindful of the need to reduce the amount of time CAHs currently spend on data entry.

11.2 Evaluation Recommendations

The Indiana Flex Program should continue its existing evaluation efforts, including the use of the Flex Scorecard for tracking process, performance, and outcome measures. However, it is recommended that a comprehensive evaluation plan be developed that clearly defines the methods for measuring the progress toward and outcome of the goals, objectives, activities, and impact measures laid out in the 3-5 year strategic plan. Data collection methods and proposed analysis plan should be included in the evaluation plan as well.

Project impact should be assessed by identifying short term, intermediate term, and long term measures. It is best to develop evaluation measures that are sensitive enough to identify impact at a precise level. For example, project satisfaction, knowledge or skills gained from attending a CAH education program, and/or impact on CAH operations may be measured using 5-, 7-, or 10- point scales rather than relying on qualitative feedback from site visits or dichotomous response options (yes/no) in survey instruments. In general, quantitative methods are better suited for detecting trends in data. In order to further improve on-going evaluation activities, training key project team members on the importance and value of evaluation data, as well as data collection and evaluation methods should be included in project work plans.